



MJPEG IP Camera

User Manual Version 2.1.7

MJCAS-310PTD



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Owner's Record

The model and serial numbers are located at the bottom. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your dealer regarding this product.

Model No. _____ Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For AC Adaptor to avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

For customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Part 15 of FCC Rules.

Declaration of Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.











NOTICE TO USERS








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We reserves the right to make any modification to this manual or the information contained herein at any time without notice. The software described herein may also be governed by the terms of a separate user license agreement.

Table of Contents

| | |
|--|----|
| <i>Overview</i> | 6 |
| <i>Package Contents.....</i> | 8 |
| <i>Connections.....</i> | 11 |
| <i>Hardware Installation.....</i> | 13 |
| <i>Logging in to Homepage.....</i> | 15 |
| Before Operation..... | 15 |
| Access the MJPEG IP Camera from the Internet Explorer for the first time..... | 19 |
| Logging in as an ordinary User..... | 21 |
| Logging in as an Administrator..... | 21 |
| <i>Operating the MJPEG IP Camera.....</i> | 22 |
| Control Panel | 23 |
| Advanced Function Area..... | 25 |
| Basic Setting | 25 |
|  System | 26 |
|  Camera..... | 28 |
|  Network | 31 |
|  User..... | 37 |
|  IP Filter | 38 |
|  FTP Client..... | 41 |
|  SMTP..... | 43 |
|  Image Memory | 45 |
|  Alarm 1 | 47 |
|  Alarm 2 | 48 |

| | | |
|---|---|----|
|  | Schedule | 49 |
|  | Motion Detection..... | 50 |
|  | Time Setting | 51 |
|  | Popup | 53 |
|  | Firmware upgrade:..... | 54 |
|  | Factory Default | 57 |
|  | Reboot..... | 58 |
| | Trigger..... | 59 |
| | Capture | 60 |
| | <i>RightMouseButton of ActiveX Control</i> | 61 |
| | View Menu..... | 62 |
| | “Image Recording...-> Save as JPEG” | 68 |
| | “Save Current Picture As ...” | 74 |
| | <i>Appendix A: Restore Factory Default Settings</i> | 76 |
| | <i>Appendix B: Alarm I/O Connector</i> | 77 |
| | <i>Appendix C: Troubleshooting & Frequently Asked Questions</i> | 79 |
| | <i>Appendix C: Troubleshooting & Frequently Asked Questions</i> | 79 |
| | <i>Appendix D: PING IP Address</i> | 84 |
| | <i>Appendix E: Bandwidth Estimation</i> | 85 |
| | <i>Appendix F: Specifications</i> | 86 |
| | <i>Appendix G: Time Zone Table</i> | 88 |
| | <i>Appendix H: DDNS Application</i> | 90 |

Overview

This user's guide explains how to operate the MJPEG IP Camera from a computer. Basically, the user's guide is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate the MJPEG IP Camera.

Introduction

This MJPEG IP Camera is an inexpensive fully scalable surveillance technology. Because the MJPEG IP Cameras can be plugged in to your existing computer network infrastructure, you will potentially save thousands of dollars on unnecessary cabling.

The MJPEG IP Camera is accessible via the LAN or Internet connection. Connect your MJPEG IP Camera directly to a computer network or DSL modem, and with a standard Web browser you get instant, on demand video streams. Within minutes you can set up the MJPEG IP Camera to capture a video sequence to a PC. Live video image can be uploaded to a website for the world to see or made available only to select users on the network.

Features:

- **High quality 1/3" CCD sensor**
- **Composite video output**
- **Motorized and wide-range pan and tilt operation**
- **16 Preset Points**
- **JPEG video compression**
- **Built-in internal microphone**
- **Remote-Control via Internet Explorer**
- **Support statistic and dynamic IP address**
- **DDNS and PPPoE**
- **CF memory card interface (for CF card enabled version only)**
- **Multi-channel control software for surveillance application**
- **On-line firmware upgrade**

Application:

- Remote monitoring
- Surveillance

Minimum System Requirement






- Microsoft Internet Explorer 5.0 or later
- VGA Monitor resolution 1024 x 768
- Pentium 4 1.3GHz or above
- Memory Size: 256MB or above
- Windows ME, 2000, XP, or 2003


Package Contents

User can find the following items in the package:

1. PT MJPEG IP Camera x 1
2. Power adapter x 1
3. Power cord x 1
4. Decoration ring x 1
5. Screw x 4
6. Terminator for Alarm I/O x 1
7. Installation software and manual CD x 1
8. Quick Start Guide x 1

| Item | Descriptions |
|---|---|
|  | <p>1. This unit is the main element of the system.</p> |
|  | <p>2. Switching Power Adapter dedicates 12V DC electric power output to MJPEG IP Camera.</p> |

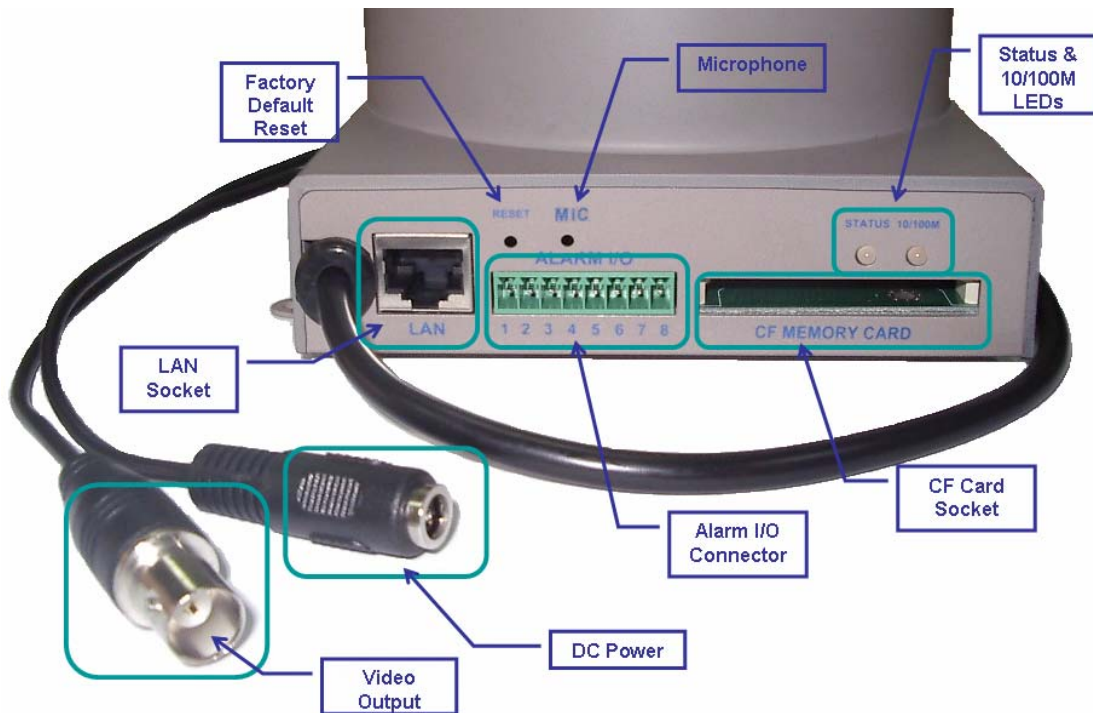
| | |
|---|--|
|  | <p>3. Power Cord provides connection between AC Power Adapter and Power Outlet for electricity.</p> |
|  | <p>4. Decorate the mounting parts. Provide four screw holes to fix MJPEG IP Camera.</p> |
|  | <p>5. Screws are used to fix MJPEG IP Camera.</p> |
|  | <p>6. Alarm I/O connector is used to provide an easy fixing interface for the wire connection from alarm devices and sensor devices to MJPEG IP Camera.</p> |
|  | <p>7. User's Manual provides important information and instructions for operating the MJPEG IP Camera.</p> |

| | |
|---|--|
|  | <p>8. Quick Start Guide provides important information and instructions for installing this device.</p> |
|---|--|

If any of the above items are missing, please contact your dealer immediately.

Note: Using a power supply with a different voltage than the one included with the MJPEG IP Camera will cause damage and void the warranty for this product.

Connections



DC Power and Video Output Cable

The DC power input and video output cable are located on the MJPEG IP Camera's back panel. The input power is 12VDC. Note that supply the power to the MJPEG IP Camera with standard power adapter included in package. Otherwise, the improper power adapter may damage the unit and result in danger.

The MJPEG IP Camera also provides composite video output. User can use BNC video cable to connect the MJPEG IP Camera with a TV monitor or VCR.

LAN Socket

Beside the DC power and video output cable, the LAN socket is an RJ-45 connector for connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built NWay protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 "straight through" cable to connect the MJPEG IP Camera to a 100Mbps Fast Ethernet network switch or hub.

Alarm I/O Connector

The MJPEG IP Camera provides a terminal block with 8 pins of connectors located on the center of the back panel. There are 3 pins for two alarm inputs and 5 pins are for alarm output. The I/O connectors are physical interface to sense and/or activate alarm signals to a variety of external sensors or alarms. Please refer to the Appendix B in this manual for more information.

CF Card Socket

The CF card socket is located on the right side of the back panel of the MJPEG IP Camera. User can plug a CF memory card into this socket to store the alarm or scheduled images. This is very useful to keep the evidence of alarms or scheduled images for reference.

Factory Default Reset

This button is hidden in the pinhole above the Alarm I/O connector. Please refer to the Appendix A in this manual for more information.

Microphone

The MJPEG IP Camera's has built-in an internal microphone. This microphone is also hidden in the pinhole above the Alarm I/O connector.

Status and 10/100M Ethernet LEDs

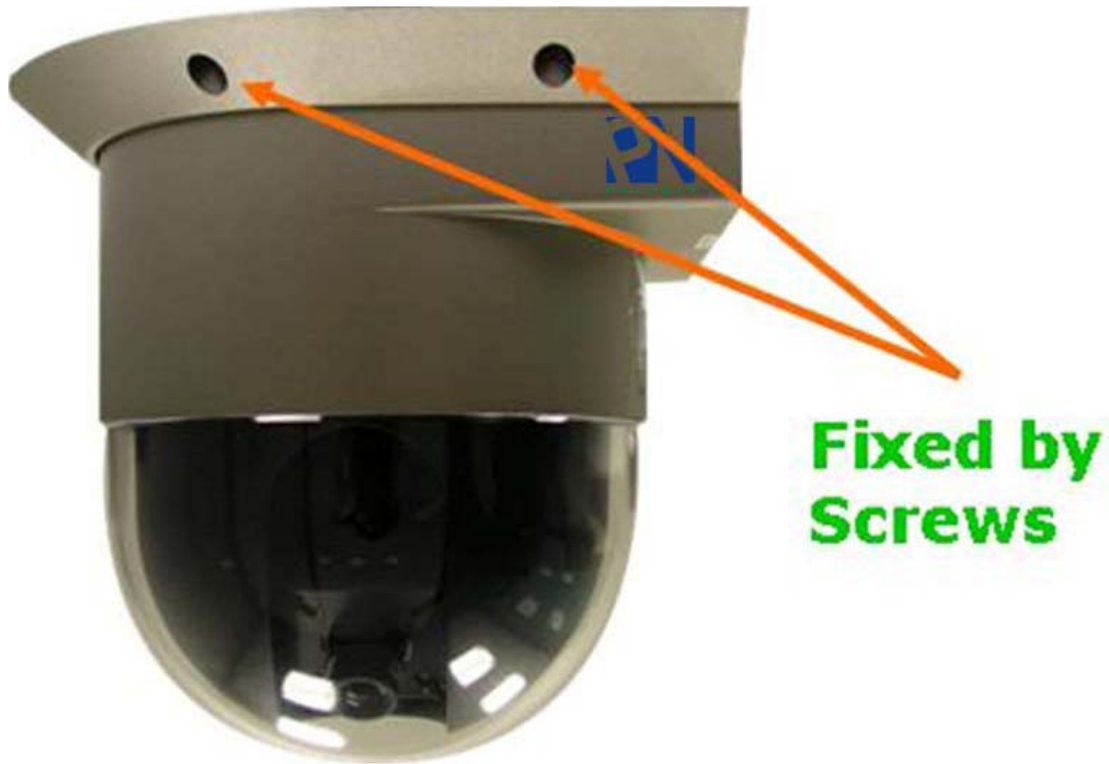
LED stands for Light-Emitting Diode. The Status and Ethernet LEDs are located on the right side of the back panel of the MJPEG IP Camera. The Status LED will turn orange while system is booting up successfully.

Ethernet LED is used to indicate the status of Network connection. While not any connection to the MJPEG IP Camera, the LED will be off and flash orange while some one access this MJPEG IP Camera.

Hardware Installation

1. Fix the MJPEG IP Camera to Ceiling

Use 4 screws to fix the MJPEG IP Camera onto the ceiling as below. You can also put the MJPEG IP Camera on the table directly.



2. Plug an Ethernet cable into MJPEG IP Camera

Connect an Ethernet cable to the LAN socket located on the MJPEG IP Camera's back panel and attach it to the network.



3. Connect the external power supply to MJPEG IP Camera

Connect the external power supply to the DC power connector attached on the extension cable from the MJPEG IP Camera. Note: Use the power adapter, 12VDC, included in the package and connect the other end to wall outlet for AC power.



Once you have installed the MJPEG IP Camera well, the status LED will turn orange. It means the system is booting up successfully. Furthermore, if you have a proper network connection, and access to the MJPEG IP Camera, the 10/100M LAN LED will flash orange

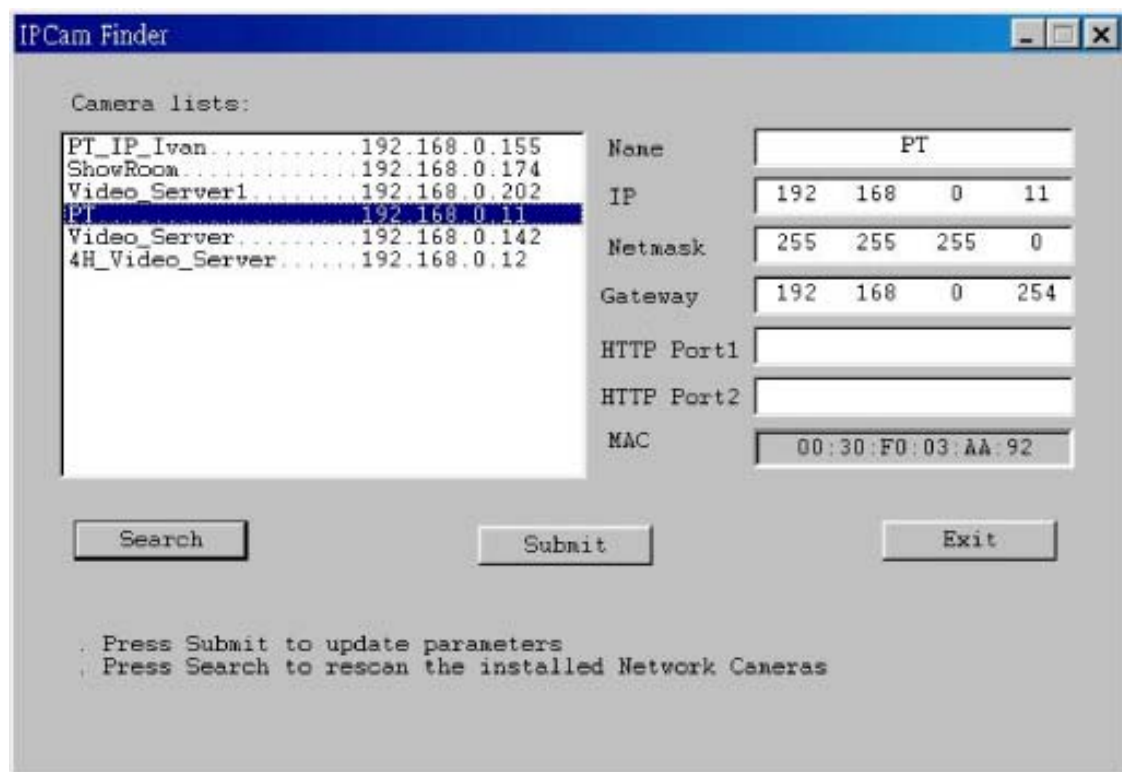
Logging in to Homepage

Before Operation

Install the IP Address of MJPEG IP Camera

When you installed your MJPEG IP Camera on your LAN environment, you may execute IPFINDER.EXE to discover MJPEG IP Camera's IP address.

IPCam Finder program (IPFINDER.EXE) is used to scan the Installed MJPEG IP Camera, setting the MJPEG IP Camera Name, IP address settings and so on.



Using your mouse to select any one of the MJPEG IP Cameras within your LAN

environment, you can find out its IP address and other IP parameters as follows:

1. Edit the Name of this MJPEG IP Camera. Note that use “_” or “-” to replace “space” character to separate the name string. For example, “PT_IP” or “PT-IP” will be right. However “PT IP” will not work here.
2. Might be needed to update the IP address of this MJPEG IP Camera. (Power recycling might be necessary)
3. Might be needed to update the Gateway Address. (Power recycling might be necessary)
4. Might be needed to update the Network Mask (255.255.255.0). (Power recycling might be necessary)
5. Might be needed to modify the port number 1 of HTTP access. (Power recycling might be necessary)
6. Might be needed to modify the port number 2 of HTTP access. (Power recycling might be necessary)
7. 'Submit' it.

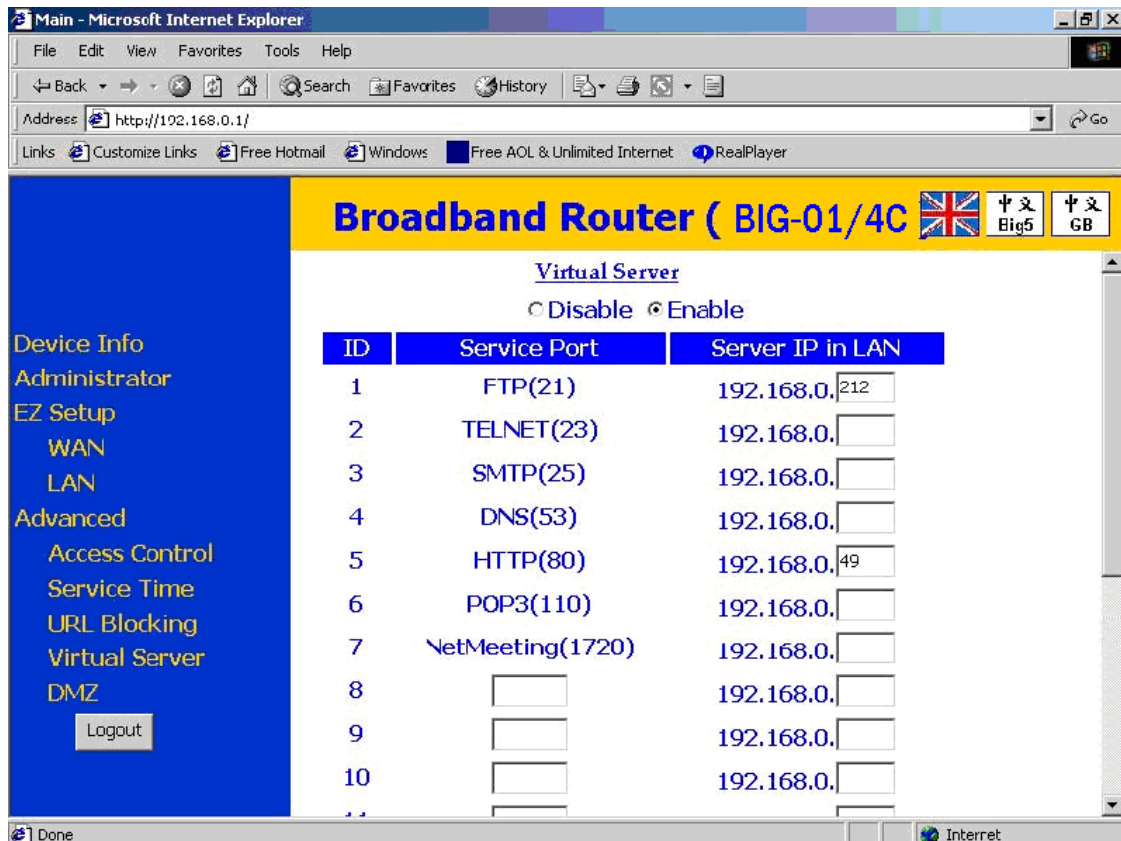
Click “submit”, the IP information of this MJPEG IP Camera will be updated after seconds

Install the MJPEG IP Camera with an ADSL Router

If the MJPEG IP Camera was installed on the LAN with an ADSL router, then the MJPEG IP Camera can get a dynamic IP address from the DHCP server. However, if the MJPEG IP Camera wants to be access from the WAN, its IP address needs to be setup as fixed IP, also the Virtual Server function of ADSL router needs to be setup as follows:

1. Setup the MJPEG IP Camera as Fixed IP, such as *192.168.0.49*.
2. Enter the administrator page of ADSL router. (Use zonet ASDL router as an example).
3. Enter the Virtual Server Page.
 - a. Setup the mapping of *HTTP Port (80)* to *192.168.0.49*.
 - b. Restart the ADSL router.

Then the MJPEG IP Camera can be access from WAN by the ADSL WAN IP Address.



First time uses the MJPEG IP Camera

The MJPEG IP Camera web page communicates with the MJPEG IP Camera using an ActiveX control. The ActiveX control must be downloaded from the MJPEG IP Camera and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the MJPEG IP Camera, user must setup his IE browser as follows:

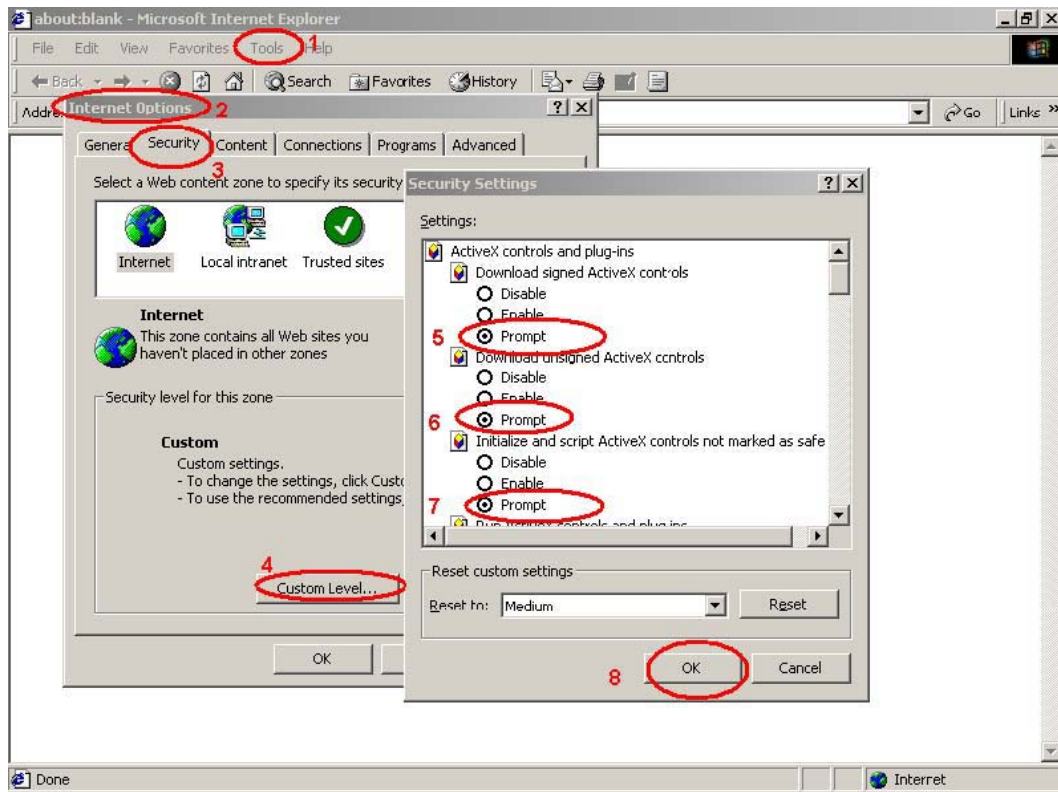
From your IE browse → "Tools" → "Internet Options..." → "Security" → "Custom Level...", please setup your "Settings" as follow.

Set the first 3 items

- Download the signed ActiveX controls
- Download the unsigned ActiveX controls
- Initialize and script the ActiveX controls not masked as safe

To Prompt

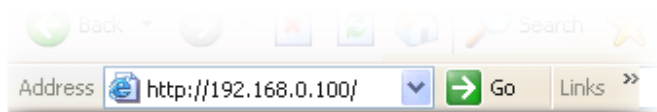
MJPEG IP Camera User's Guide



By now, you have finished your entire PC configuration for MJPEG IP Camera.

Access the MJPEG IP Camera from the Internet Explorer for the first time

1. Start the web browser on the computer and type the IP address of the MJPEG IP Camera you want to monitor as below:



The Login Window of the MJPEG IP Camera is displayed:



2. Type in your login name and password under "USERNAME" and "PASSWORD" textbox.

For the first time use (default value), input the

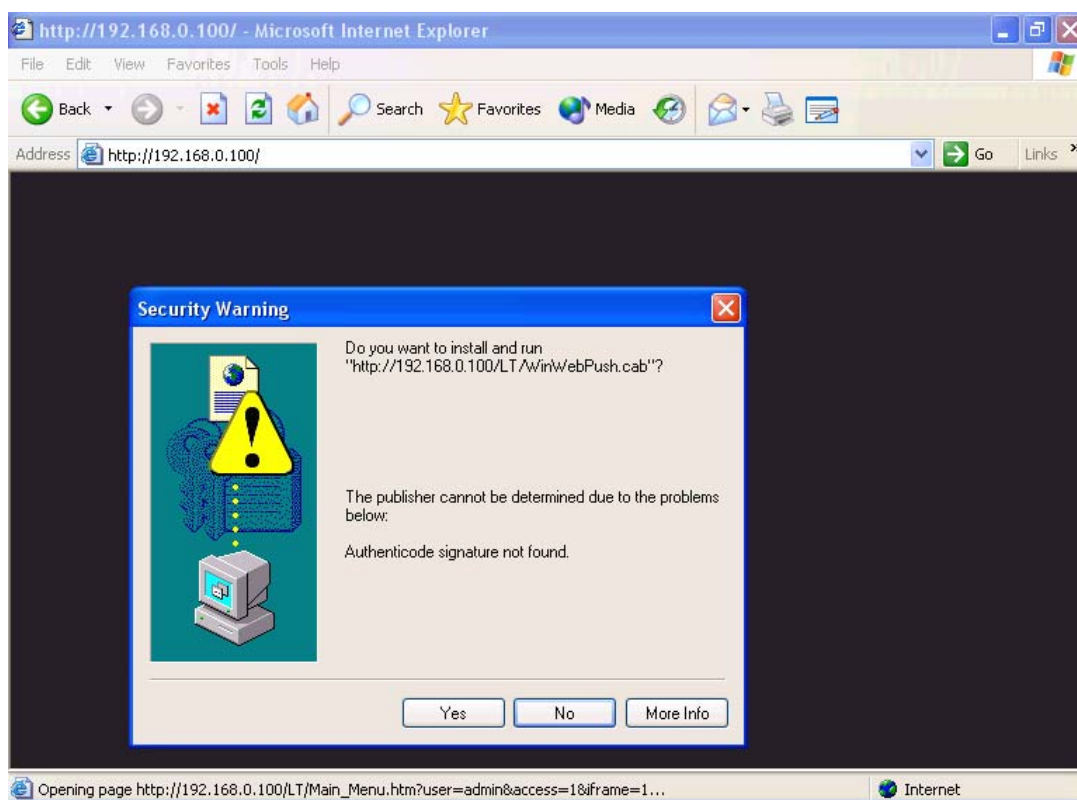
User Name: **admin**

Password:

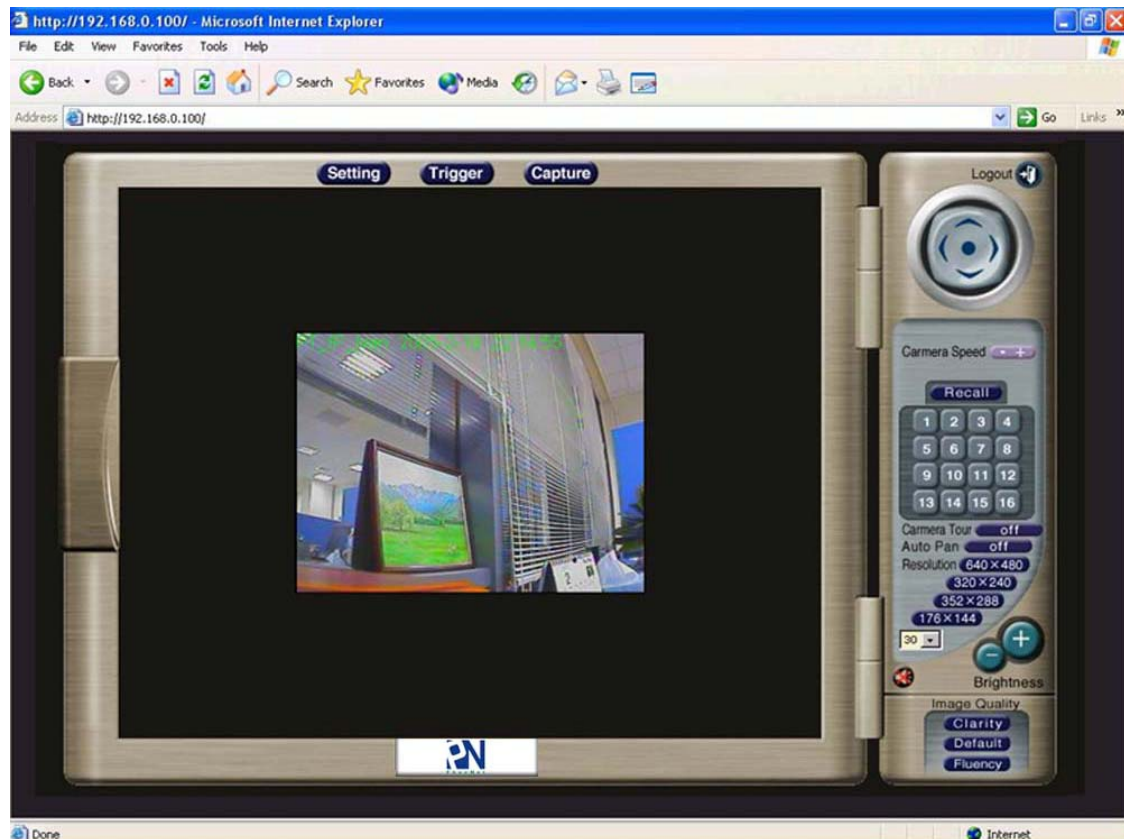
That's, type in **"admin"** on the **"USERNAME"** as a default name and leave **PASSWORD** textbox blank. Click **"OK"** button to start the main menu.

Now, you login to the MJPEG IP Camera as a full-authorized administrator. You can enter **"Setting"** to change the password and setup **"Administrator"** or **"User"** authority. Please refer to **"Setting" → "User"** and **"IP Filter"**.

3. The IE Web Page will display the **"Security Warning"** window, select **"Yes"** to install and run the ActiveX control into your PC.



4. Display the image. After the ActiveX control was installed and ran, the first image will be displayed.



Logging in as an ordinary User

For ordinary user usage, “Setting”, “Trigger”, and “Capture” will be not available. On the right side of the screen, there are lots of controls and function buttons. If “Remote camera control” is turned off by the administrator, then those control and function buttons will not be available as well.

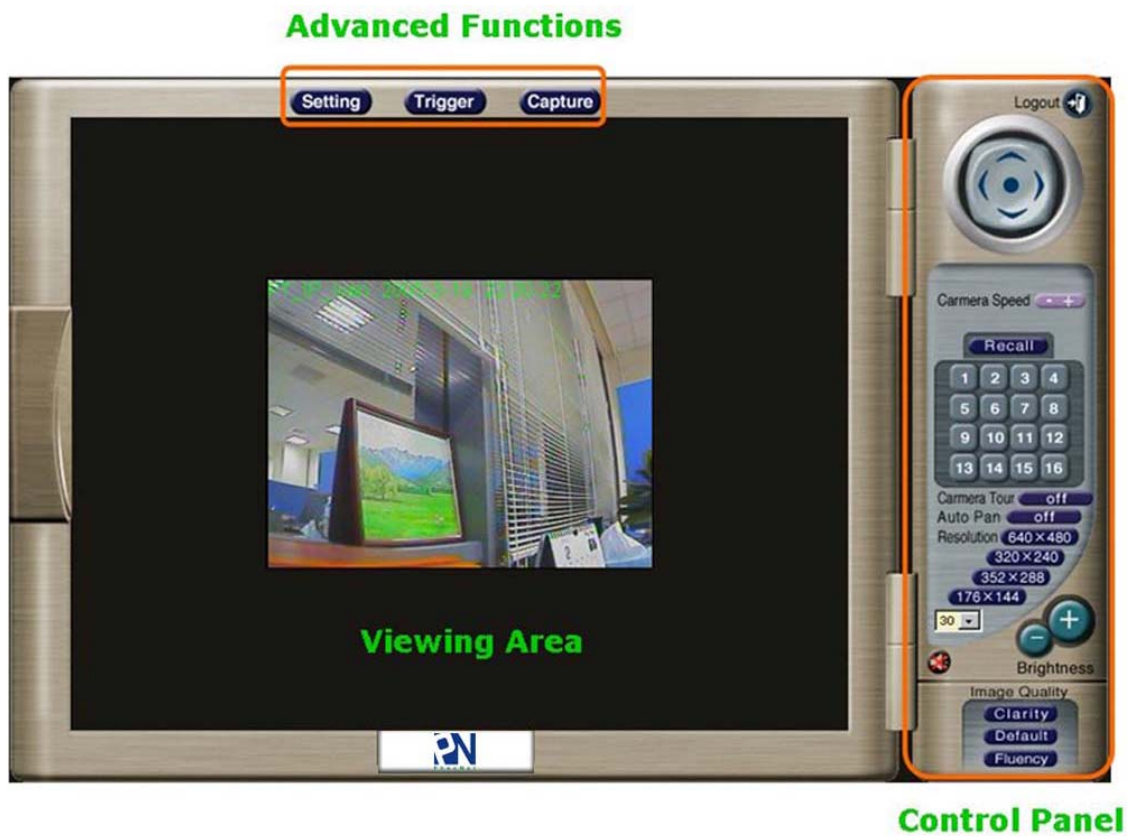
For the rest of this user guide, it is assumed that the “Remote camera control” will be turned on for normal operation.

Logging in as an Administrator

If you log in the MJPEG IP Camera as the Administrator, you can perform all the settings provided within the software. The Administrator may be logged in at any time, regardless of the number of the users being accessed.

Operating the MJPEG IP Camera

Start-up screen will be as follow no matter an ordinary users or an administrator.



Viewing Area: Images from the MJPEG IP Camera

Control Panel

Control Panel Area: MJPEG IP Camera Manipulation and image quality control



| Item | Button | Meaning |
|------|----------------------|---|
| 1 | Camera direction | Control camera up/down/left/right and home position |
| 2 | Camera speed | Adjust camera speed up / down |
| 3 | Preset / Recall mode | Preset: Set up camera to fixed locations before operation Recall: Drive camera position to preset location |

| | | |
|----|----------------------------------|---|
| | | During preset mode, click the number and a dialogue box for the inquiry of location name input will appear. |
| 4 | Preset / Recall camera locations | Preset or Recall camera 1~16 location(s) Ex. If you press 5, then the camera will move to preset location 5. |
| 5 | Camera tour on / off | Turn on or off the camera tour. Camera tour is comprised by series of preset locations. |
| 6 | Auto pan on / off | Turn on or off the auto pan of camera. While auto pan is on, the camera will swing the camera from leftmost to rightmost tour and then from rightmost to leftmost cyclically. |
| 7 | Video resolution | Adjust Video resolution MJPEG IP Camera provides 4 resolutions: 640x480, 352x288, 320x240, 176x144 For NTSC camera: 320x240 is suitable For PAL camera: 352x288 and 176x144 are suitable However, all resolution are available for NTSC and PAL camera |
| 8 | Video brightness adjustment | Adjust video brightness of camera |
| 9 | Frame rate adjustment | Adjust video frame rate via scrolling the listed numbers: 1, 5, 10, 15, 20, 25, 30 |
| 10 | Audio On/Off | Turn on/off audio output function. Note: This function is not available in MJPEG IP Camera. |
| 11 | Video quality adjustment | Adjust video quality. Clarity: Video is better but frame rate may be slower Fluency: Video is not as good as Clarity but frame rate may be higher Default: System default value |

Advanced Function Area






Advanced function area: only available for administrator. It has contained three categories.

| | |
|---------|---|
| Setting | System Configuration |
| Trigger | Send out current message or setup activities |
| Capture | Capture current screen and save to HDD or other media |

Setting menu consists of the Basic menu and the Application menu. The Basic menu is used for basic settings of the MJPEG IP Camera, and the Application menu is used for setting various applications according to individual. Click on each menu name to display its setting page.

Basic Setting

For the setting, you will see there are divided into two categories – Basic Setting and Application.

| Basic Setting | | |
|---|-----------|---|
| Symbol | Item | Action |
|  | System | Define Frame Rate, Turn on/off "Remote camera control", and view system log file. |
|  | Camera | Adjust camera parameters and set camera tour |
|  | Network | Configure Network setting such as DHCP On/Off, DDNS and PPPoE |
|  | User | Setup user name, password and login privilege |
|  | IP Filter | Setup legal IP address of user login (This function should be used with function "User" respectively) |



System: Define Frame Rate and Turn on/off “Remote camera control”

System Setting

| | |
|------------------------------|---|
| System ID | rmC9GmvgCaM |
| Camera Name | <input type="text" value="PT"/> |
| Default frame rate | <input type="button" value="1"/> ▼ |
| Remote camera control | <input checked="" type="radio"/> ON <input type="radio"/> OFF |
| Log | <input type="button" value="View"/> |

System ID:

It's a unique number for each MJPEG IP Camera for identification.

Camera Name:

You can enter the name of this unit here. It's very useful to identify the specific device from multiple units. Note that use “_” or “-” to replace “space” character to separate the name string. For example, “PT_IP” or “PT-IP” will be ok and “PT IP” will not work here.

Default frame rate:

You can set up frame rate here or via right-side control panel.

For example, set the frame rate to 5 FPS, then the image will be updated for 5 frames per second, the time interval can be checked by the time displayed on the image.

Remote camera control:

Turn on “Remote camera control”: users will be able to use right-side control panel vice versa.

Log:

User can check the log information of the MJPEG IP Camera, including the *Main Info*, *Appended Info*, *Operator IP*, *Operator MAC*, and *Time*.

Select the “View” button to check the log file.

| System Log | | | |
|-----------------|-----|---------------|-----------------------|
| Date | IP | MAC | Event |
| 2/18/2005 11:40 | --> | | System Boot |
| 2/18/2005 11:40 | --> | 127.0.0.1 | New client |
| 2/18/2005 11:43 | --> | 192.168.0.119 | New client |
| 2/18/2005 11:43 | --> | 192.168.0.119 | Set Server Time |
| 2/18/2005 11:46 | --> | 192.168.0.69 | New client |
| 2/18/2005 11:48 | --> | 192.168.0.119 | Unknown log info (35) |
| 2/18/2005 11:50 | --> | 192.168.0.119 | Unknown log info (35) |
| 2/18/2005 11:51 | --> | 192.168.0.119 | Unknown log info (35) |
| 2/18/2005 12:10 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 12:10 | --> | 192.168.0.119 | Unknown log info (35) |
| 2/18/2005 12:10 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:1 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:1 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:1 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:1 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:1 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:2 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:6 | --> | 192.168.0.69 | Unknown log info (35) |
| 2/18/2005 13:6 | --> | 192.168.0.69 | Unknown log info (35) |



Camera: Adjust Camera parameters

Camera Setting

Camera PT ☐ Reverse Pan ☐ Reverse Tilt

Image Size

Image Quality

Image ☒ Color ☐ Monochrome

Mirror ☒ Normal ☐ Reversed

Focus Mode

White Balance Mode

Exposure Mode

Saturation (0 ~ 255)

Sharpness (0 ~ 255)

Contrast (0 ~ 255)

Hue (0 ~ 255)

Audio ☒ Adpcm ☐ Pcm

Camera Tour ☒ ON ☐ OFF

Reset to Default ☒ YES ☐ NO

Camera PT:

User can control the direction of Pan and Tilt as wish.

Reverse Pan: Check this option to reverse pan direction.

Reverse Tilt: Check this option to reverse tilt direction.

Image Size:

MJPEG IP Camera provides 4 resolutions:

- 176x144
- 320x240
- 352x288
- 640x480

Image Quality:

The MJPEG IP Camera provide 3 quality setting,

Clarity: Video is better but frame rate may be slower

Fluency: Video is not as good as Clarity but frame rate may be higher

Default: System default value.

Note: The value on the list box display the current setting of the current image, when you make a new selection, the value on the list box will be changed until you save the new setting.

Image, Mirror, Focus Mode, White Balance Mode, Exposure Mode:

These functions are available for PTZ MJPEG IP Camera and Video Server only. It's not functional for this model.

Saturation, Sharpness, Contrast, Hue:

To control the camera parameters, key in these values respectively.

Audio:

PCM and ADPCM could be selected as compression method of audio. Normally, ADPCM could generate smaller size of audio data rate.

Camera Tour:

The screenshot shows a web-based configuration interface for a camera tour. At the top, there's a 'Tour name' dropdown menu set to 'A'. Below it is a 'Dwelling time' input field with the value '4' and a range '(2 to 3600sec)'. The 'Sequence' section consists of 16 numbered points, each with a dropdown menu showing a location name (e.g., '1: 1', '2: 2', '3: 6', etc.). Below the sequence, there are five radio buttons labeled 'A' through 'E' under the 'Enable' heading. At the bottom right, there are two buttons: 'SAVE' and 'BACK'.

Tour Name: The group name of the sequence of camera tour

Dwelling Time: The time period between every tour point.

Sequence: 16 points can be assigned. The tour point will also show the location name if you had entered the location name while preset the camera.

Enable: Which sequence group should be activated.

To use the camera tour function, user must preset some camera positions first. The maximum number of preset points is 16.

In the Camera Tour page, choose the one tour name from A to E. Fill the dwelling time and tour sequence by preset points, and then save these setting. You can repeat above procedure to set more camera tours.

Now, you could choose one of the camera tours and click "SAVE" button to enable it.

Reset to Default:

Restore the values of these pages to factory default value.



Network: Configure Network setting such as DHCP On/Off, DDNS and PPPoE

Network Setting

| | |
|------------------------|---|
| DHCP | <input checked="" type="radio"/> ON <input type="radio"/> OFF |
| IP address | 192.168.0.183 |
| Subnet mask | 255.255.255.0 |
| Default gateway | 192.168.0.254 |
| MAC address | 00:30:f0:03:ff:db |
| Primary DNS | 168.95.1.1 |
| Secondary DNS | 0.0.0.0 |
| HTTP Port 1 | 80 |
| HTTP Port 2 | 0 |
| IP Finder | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| DDNS | DDNS Setting |
| PPPoE | PPPoE Setting |

DHCP:

DHCP: Stands for Dynamic Host Configuration Protocol.

“DHCP ON” is default network setting of the MJPEG IP Camera, when a MJPEG IP Camera is joined into the LAN, it will issue the DHCP packets to request an IP address that is dynamically assigned by the DHCP server. If it can not get a DHCP address on a limited tries, the MJPEG IP Camera will assigned a default IP address as the default IP address.

IP address, Subnet mask, Default gateway, Primary DNS, Secondary DNS:

If you turn DHCP OFF, then you need to enter those network parameters by yourself.

Note: User need to reboot the MJPEG IP Camera to make this setting to take effect.

HTTP Port 1:

Users could assign the port number of http protocol, and the WAN users should follow the port number to login. If the http port1 is not assigned as 80, users have to add the port number in back of IP address. For example: <http://211.223.36.58:12000>. If the http port1 is assigned as 80, users do not have to add the port number in the back of IP address.

HTTP Port 2:

The function is the same as http port 1. It's the second choice of the port number.

Current implementation supports 2 HTTP port setting, the Http port 1 set to 80, the Http port 2 is not defined. The user can access the IPCam by

<http://xx.xx.xx.xx/>, or

<http://xx.xx.xx.xx:xxxx/> to access the IPCam.

Suggest keeping the Http port 1 as 80 to make sure the IPCam can be accessed by the default HTTP port setting access on the LAN. <http://xx.xx.xx.xx/>

If multiple IPCams are installed on the LAN, also required to be accessed from the WAN, then the Http port 2 can be changed as the virtual server port mapping to support multiple IPCams.

Note: If you just want to reboot system without change anything. You could click SAVE button directly, then system will reboot again without any setting changed.

IP Finder:

User can use IPCam Finder software program to find MJPEG IP Cameras on the LAN. User also can set related parameters of MJPEG IP Camera by IPCam Finder. However if administrator does not allow related parameters to be modified by IPCam Finder, then disable this option.

DDNS:

DDNS: Stands for Dynamic Domain Name Server

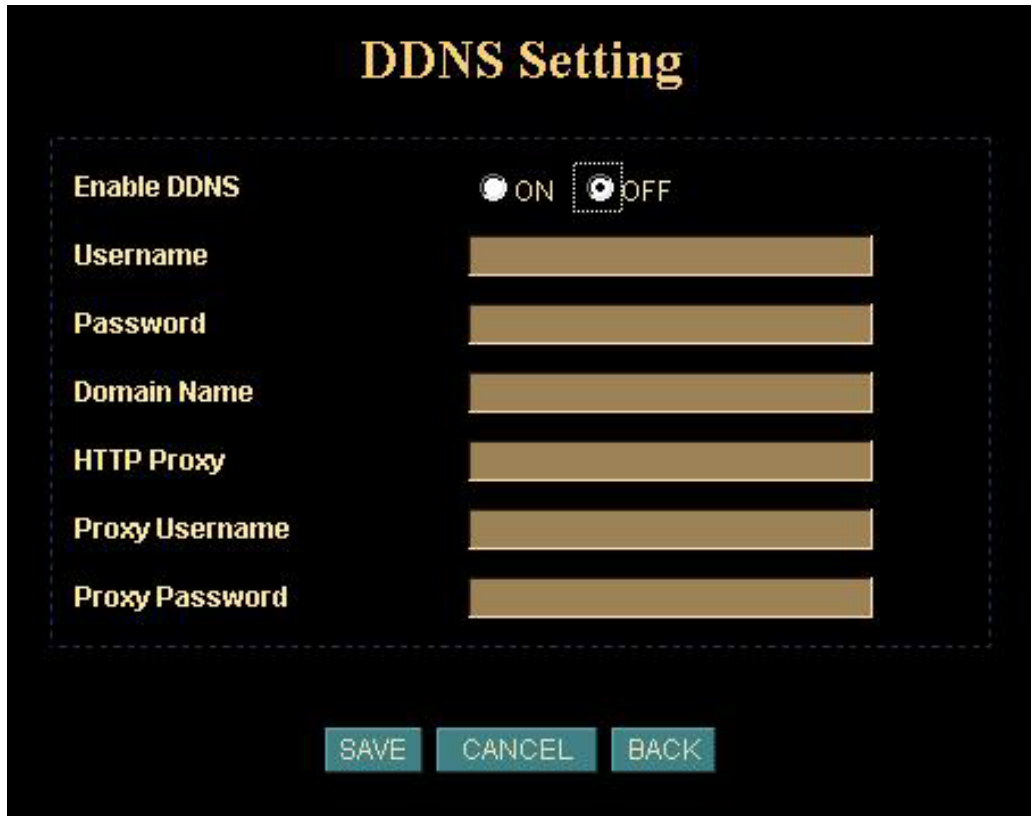
The MJPEG IP Camera supports DDNS. DDNS allows the MJPEG IP Camera to use an easier way to remember naming format rather than an IP address. The name of the domain is like the name of a person, and the IP address is like his phone number. On

the Internet we have IP numbers for each host (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to ADSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary. For more DDNS configuration, please consult your local dealer.

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it's likely to change periodically. Just how often it changes, depends on your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN IP address is when you want to access your network over the Internet. The solution to the dynamic IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names, such as www.veo.com, are just easy to remember aliases for IP addresses. A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet and best of all they're free to use. Two such services you can use are www.no-ip.com and www.DynDNS.org. You'll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions.

A DDNS service works by uploading your WAN IP address to its servers periodically. Your gateway-router may support DDNS directly, in which case you can enter your DDNS account information into your router and it will update the DDNS servers automatically when your IP address changes. Please consult your router's documentation for more information. If your router does not support DDNS, you can run a small client utility on any PC on your network which will perform the updating. The client utility is usually provided for free by the service.



The image shows a web-based configuration interface titled "DDNS Setting". At the top, the title is in a large, bold, black font. Below the title, there is a section for "Enable DDNS" with two radio buttons: "ON" (selected) and "OFF". Below this, there are seven input fields, each with a label to its left: "Username", "Password", "Domain Name", "HTTP Proxy", "Proxy Username", and "Proxy Password". Each input field is a simple text box with a light gray border. At the bottom of the form, there are three buttons: "SAVE", "CANCEL", and "BACK", each in a blue box with white text.

DDNS Setting

Enable DDNS ☒ ON ☐ OFF

Username

Password

Domain Name

HTTP Proxy

Proxy Username

Proxy Password

PPPoE:

PPPoE: Stands for Point to Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows a local PC with xDSL or cable connects with broadband network. Also this local PC gets a dynamic IP address. For more PPPoE and Internet configuration, please consult your local dealer or ISP.

PPPoE Setting

Dial On Power Up ☐

User

Password

Send mail after dialed. ☐

Mail server

Username

Password ☐ Check Password

Sender email

Receiver email

Subject

SAVE **DIAL** **CANCEL** **BACK**

The MJPEG IP Camera can directly connect to the ADSL, however, it should be setup on LAN environment to setup the PPPoE information, and then connect to the ADSL modem. Power on again, then the MJPEG IP Camera will dial on to the ISP connect to the WAN through the ADSL modem.

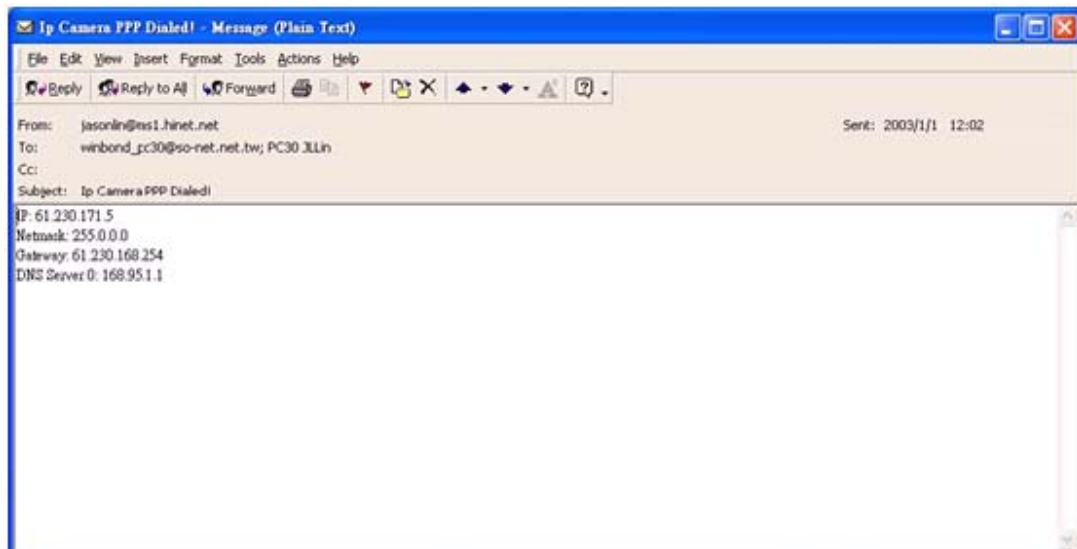
The procedures are

- Connect to the LAN by DHCP or Fixed IP
- Access the MJPEG IP Camera, enter Setting → Network.
- Check the radio button of “PPPoE Setting”.
- If the ADSL Modem and MJPEG IP Camera were connected on a hub, after the MJPEG IP Camera information were inputted, and then you can press “Dial” to

do the PPPoE dial.

- Input the “User” and “Password” fields by the account and password provided by the ISP.
- If the check box of “Send Mail after dialed” was checked, then the “MailServer” and “User on the MailServer” field need to be filled.
- If the mail server needs authentication, then the check box of “Password” needs to be checked, and password information need to inputted.
- Also the “Sender email”, “Receiver email” needs to be inputted.
- The “Subject” field can be modified too.
- Select “Save” to save the setting.

If the PPPoE option “Send mail after dialed”, then when PPPoE dialed up to ISP, a mail that contains the Dialup IP Address/ Netmask/ Gateway address/ DNS Server address will be mailed to preset e-Mail address.





User: Setup user name, password and login privilege

User Setting

☐ Disable Authentication

| User ID | Username | Password | Access right |
|----------------------|----------|----------|---------------|
| Administrator | admin | | |
| User 1 | guest | ***** | User |
| User 2 | | | Administrator |
| User 3 | | | Administrator |
| User 4 | | | Administrator |
| User 5 | | | Administrator |
| User 6 | | | Administrator |
| User 7 | | | Administrator |
| User 8 | | | Administrator |
| User 9 | | | Administrator |
| User 10 | | | Administrator |

SAVE
CANCEL

Disable Authentication: If user checks this option, MJPEG IP Camera or Video Server will not check username and password any more while user log into the system.

User only can input or modify the password of "Administrator". The username of "Administrator" is fixed as "admin"

You can set up to 10 different usernames and passwords. Although there are 10 sets only, you may have one group of people use one username and password to login. Every one set of username and password can be acted as an Administrator or just a normal user.

Select "Save" to save the setting.



IP Filter: Setup user login right (This function should be used with function “User” respectively).

You can enter 10 different user's IP address which are allowing enter or disregarding by the MJPEG IP Camera.

You should configure “User” before “IP Filter”. Each “User” username and password matches with one “IP Filter” user.

IP Filter

Default policy

Allow
▼

| User ID | IP From | To | Policy |
|---------|---|---|--|
| User 1 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 2 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 3 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 4 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 5 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 6 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 7 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 8 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 9 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |
| User 10 | <input style="width: 100%;" type="text"/> | <input style="width: 100%;" type="text"/> | <div style="border: 1px solid #ccc; padding: 2px; text-align: right;">▼</div> |

SAVE

CANCEL

Select “Save” to save the setting.

Function Notification

The page of user setting is very closely related to the IP filter settings. While the administrators are setting these two pages, they should notice that login authorities are not only based on the login names but also the range of IP addresses. Administrators could reject login users according to both login names and IP addresses. We setup several examples to explain the logical relations between login names and the IP policy. The users login in the name of "admin" have the most power. System will always accept no matter how IP filter setting was set.

-1-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Allow
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be successful. If these users did not come from the IP addresses A to B, login access will be rejected.

-2-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Deny
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be denied. If these users did not come from the IP addresses A to B, login access will be successful.













-3-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Deny, login name1 comes from 192.168.0.A to B=Allow
That is, when the remote users login in the name of 12345 and come from the IP addresses 192.168.0.A to 192.168.0.B, login will be successful. If these users did not come from the IP addresses A to B, login access will be rejected.

-4-

(User page) Login name 1= 12345, Password=12345, Access Authority=whatever
(IP filter page) Default Policy=Allow, login name1 comes from 192.168.0.A to B=Allow
That is, login of all the login names will be rejected except the login name "admin".

Application Setting

| Application | | |
|---|------------------|--|
| Symbol | Item | Action |
|  | FTP Client | Setup the MJPEG IP Camera as a client site and configure Server site in order to upload images to server |
|  | SMTP | Setup Mail configuration |
|  | Image Memory | Setup CF memory card setting or view the pictures stored in CF memory card (Note: for CF memory card enabled version only) |
|  | Alarm 1 | Setup Alarm Output 1 action via manual or event |
|  | Alarm 2 | Setup Alarm Output 2 action via manual or event |
|  | Schedule | Set the schedule to enable motion detection |
|  | Motion Detection | Setup motion detection area and sensor sensitivity |
|  | Time Setting | Setup the MJPEG IP Camera time configuration |
|  | Popup | Setup event message while motion or sensors has been activated |
|  | Firmware Upgrade | Firmware upgrade |
|  | Factory Default | Recall the MJPEG IP Camera factory default setting |
|  | Reboot | Reboot this device |



FTP Client: Setup the MJPEG IP Camera as a client site and configure Server site in order to upload images to server

When alarm was enabled, user can send the captured images to the pre-set FTP server.

FTP Client Setting

FTP server name

User name

Password

Remote path

Image file name

Suffix ☐ None ☐ Date / Time ☐ Sequence number

Sequence No. clear ☐ Yes ☐ No

☐ Motion Detection

Mode ☐ ☐ Sensor1 ☐ Periodical sending ☒ OFF

☐ Sensor2

Entering server name and your login username and password, you will be able to upload those previous captured image to the FTP server. You can also send data to the server according to different situation such as by event or by period.

FTP server name:

Type the FTP server name to upload still images, or the IP address of the FTP server.

User name:

Type the user name for the FTP server.

Password:

Type the password for the FTP server.

Remote path:

Type the path to the destination.

Image file name:

Type the basic file name you want to assign to the images when sending to the FTP server.

Suffix:

Select the suffix to add to the file name.

- None:

No suffix is added. The basic file name is assigned to the image to be sent to the FTP server.

- Date/Time:

The date/time suffix is added to the file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and consecutive number (2 digits), thus 14-digit number is added to the file name.

- Sequence number:

A consecutive number is added to the basic file name. A number of up to 10 digits between 0000000000 to 4294967295 is added to the file name.

Sequence No. clear:

Reset the sequence number to 0000000000.

Mode:

Send a captured image via three different situations – via event such as motion detected or sensor1/2 activated or send it periodically or off.

Select "SAVE" to save the setting.



SMTP: Setup Mail configuration

When alarm was enabled, user can setup the mail to send the captured images to the pre-set mail address.

A screenshot of the 'SMTP Setting' dialog box. The title 'SMTP Setting' is at the top in a large, bold, black font. Below the title is a dashed rectangular border containing several input fields and checkboxes. The fields are: 'SMTP server name' (empty), 'Username' (empty), 'Password' (empty) with a 'Check Password' checkbox to its left, 'Sender's Mail Box' (empty), 'Receiver's Mail Box' (empty), and 'Subject' (containing 'IP Camera Warning!'). Below these fields is a 'Mode' section with four options: 'Motion Detection' (checkbox), 'Sensor1' (radio button), 'Periodical sending' (radio button), and 'OFF' (radio button). Below the 'Mode' section are two buttons: 'SAVE' and 'CANCEL'.

You may setup SMTP mail parameters for future event-message receiving such as motion detected or sensor activated.

SMTP server name:

Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

User name:

Type the user name for the SMTP server.

Password:

Type the password for the SMTP server.

Sender's e-mail address:

Type the sender's E-mail address.

Receiver's e-mail address:

Type the receiver's e-mail address. This address is used for reply mail. **Note:** you can key in multiple receiver's email address at the time.

Subject:

Type the subject/title of the E-mail up to 64 characters.

Mode:

Send a captured image via three different situations – via event such as motion detected or sensor1/2 activated or send it periodically or off.

Select "SAVE" to save the setting.



Image Memory: Setup CF memory card setting or view the pictures stored in CF memory card

Note1: This function is for CF memory card enabled version only. If this option is not listed on setting menu, it means this MJPEG IP Camera does not support CF memory card function.

Note2: Currently, only SAM-DISK®'s CF memory card is approved for this device. We could not guarantee compatible issue for other CF memory card.

User can store the picture into CF memory card locally by this function. It's very useful to keep image as evidence even though without remote surveillance and remote recording.

Image Memory ☒ Enable ☐ Disable

File Name ☒ Date / Time ☐ Sequence number

Overwrite ☐ On ☒ OFF

Capacity Warning ☐ Send Mail ☒ OFF

☒ Motion Detection

Mode ☒ ☐ Sensor1 ☐ Periodical sending ☐ OFF

☐ Sensor2

Free Space 453820416bytes

Memory Content [View](#)

[SAVE](#) [CANCEL](#)

Image Memory:

Choose enable button will activate the CF memory card recording function or choose disable button will stop this function.

Note: Because this device does not support plug and play function yet. Therefore, while you want to plug a CF memory card into slot, please make sure power off the device first,

then plug this CF memory card securely. When you want to remove this CF memory card from device, make sure click the disable button first, power off this device, and then remove this CF memory card. Otherwise, this CF memory card may be damaged and all image files are lost.

File Name:

The recording filename can be based on either date/time or sequence number.

Overwrite:

While the attached CF memory card is full, either stop recording or overwrite the oldest file.

Capacity Warning:

While the attached CF memory card is full, this device can send a email for warning.

Mode:

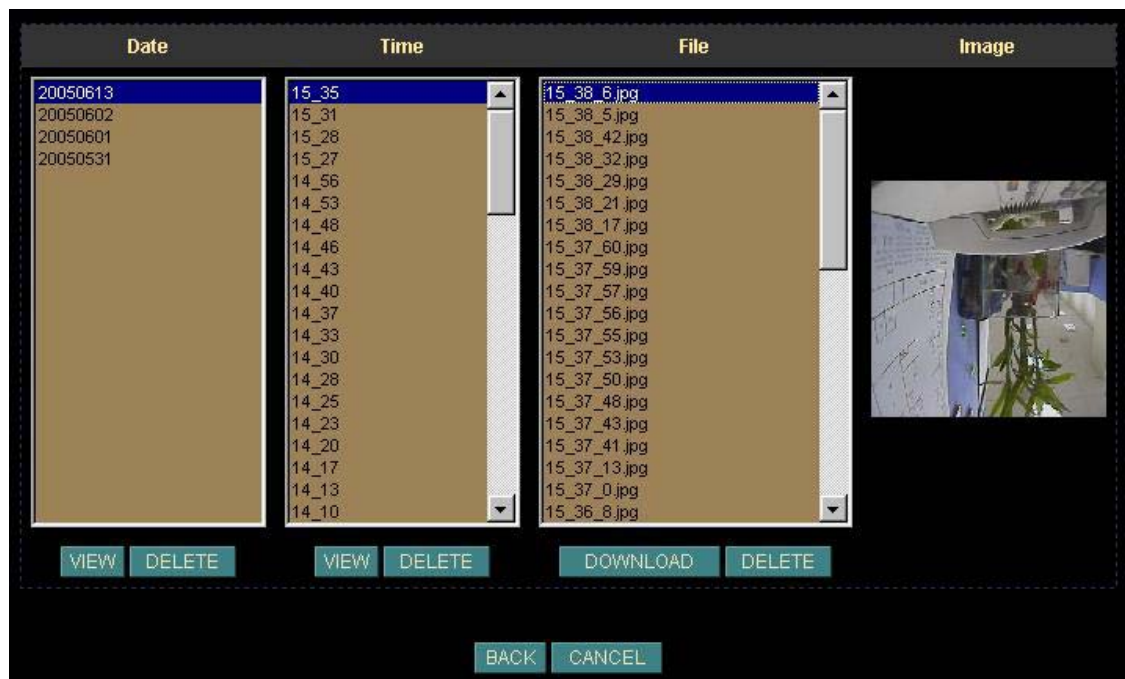
Send a captured image via three different situations – via event such as motion detected or sensor1/2 activated or send it periodically or off.

Free Space:

Show the available space of the attached CF memory card.

Memory Content:

This function can view or delete the image files stored in the CF memory card.



Select "SAVE" to save the setting.



Alarm 1: Setup Alarm Output 1 action

Alarm out 1

Duration seconds (0~86400, 0 means static)

Mode

☒ Manual ☐ Motion Detection

☐ Sensor 1

☐ Sensor 2

Duration:

Set up the alarm duration. "0" means the alarm working always.

Mode:

You can issue an alarm output action by manual or event such as motion detected or sensor1/2 activated.

Select "SAVE" to save the setting.



Alarm 2: Setup Alarm Output 2 action

Alarm out 2

Duration seconds (0~86400, 0 means static)

Mode

☒ Manual ☐ Motion Detection

☐ Sensor 1

☐ Sensor 2

Duration:

Set up the alarm duration. "0" means the alarm working always.

Mode:

You can issue an alarm output action by manual or event such as motion detected or sensor1/2 activated.

Select "SAVE" to save the setting.



Schedule: Setup event schedule

Schedule Setting

| Schedule No. | Schedule Date. | Start Time. | End Time. | Event. |
|--------------|--|-------------|-----------|--------|
| No. 0 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |
| No. 1 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |
| No. 2 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |
| No. 3 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |
| No. 4 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |
| No. 5 | <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat <input type="checkbox"/> Sun | 0 : 0 | 0 : 0 | |

SAVE
CANCEL

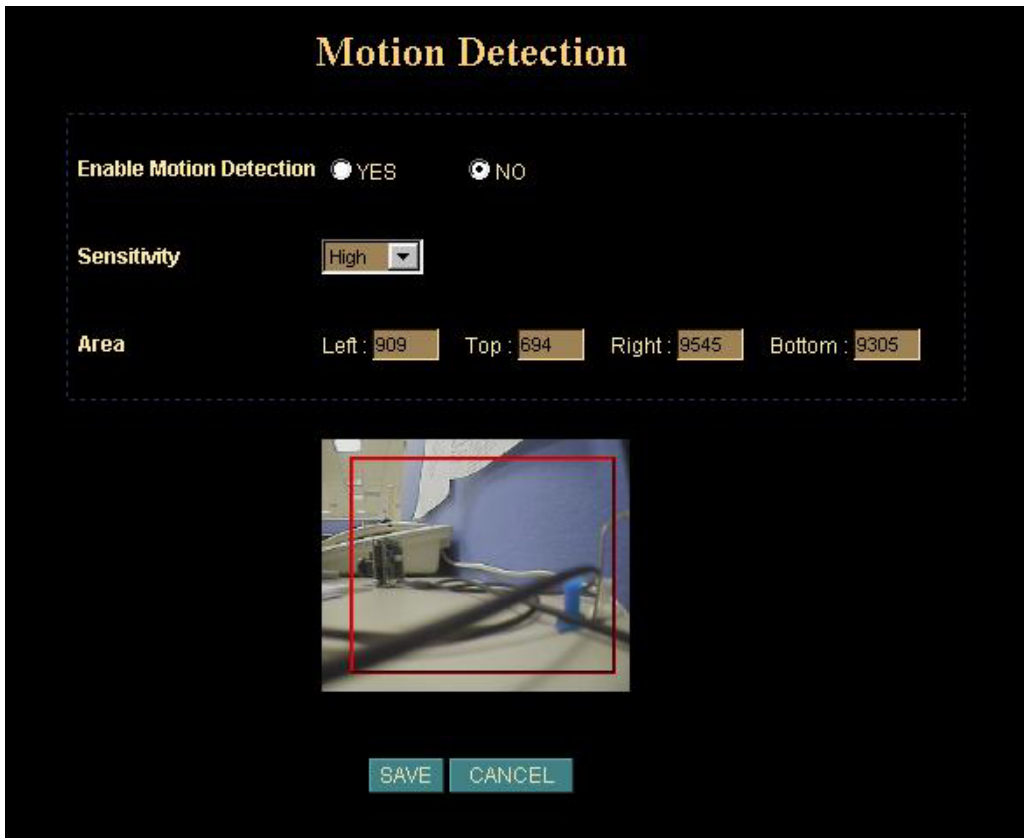
The schedule setting is used to set the time schedule for events. The event may be “Star Motion Detection” or others. There are 6 schedules to be programmable.

Select “SAVE” to save the setting.



Motion Detection: Setup motion detection area and sensor sensitivity

The motion detection is implemented by a patented software algorithm, it runs on the MJPEG IP Camera, due to a larger processing power of motion detection, the overall performance of MJPEG IP Camera will be degraded; the frame rate may be reduced.

A screenshot of the 'Motion Detection' configuration window. The window has a black background with yellow text. At the top, the title 'Motion Detection' is displayed in yellow. Below the title, there is a dashed yellow border containing the following settings: 'Enable Motion Detection' with two radio buttons, 'YES' (selected) and 'NO'; 'Sensitivity' with a dropdown menu showing 'High'; and 'Area' with four input fields: 'Left: 909', 'Top: 694', 'Right: 9545', and 'Bottom: 9305'. Below the dashed box is a small video feed showing a room with a red rectangle overlaid on the floor, indicating the detection area. At the bottom of the window are two buttons: 'SAVE' and 'CANCEL'.

You can enable or disable motion detection. If you enable motion detection, you can also setup detection sensitivity from one of three sensitivity levels.

By dragging mouse position on the image, you can see a red-box area which is the motion detection area according to your sensitivity.



Time Setting: Setup the MJPEG IP Camera time configuration

You can setup the MJPEG IP Camera time or make it synchronized with PC or remote server. Also, you may select your time zone in order to synchronize time locally.

The screenshot shows a web interface titled "Time Setting". It contains several input fields and radio buttons. The "IP Cam Time" field shows "Saturday, February 01, 2003 8:00:00". The "PC Time" field shows "Thursday, February 17, 2005 1:49:46". The "Set Time" section has three radio buttons: "Synchronize with PC's time" (which is selected), "User Input", and "NTP". Below these are fields for "Date (yy/mm/dd)" with the value "2005/2/17", "Time (hh:mm:ss)" with the value "13:43:46", and "Time Zone" with a dropdown menu showing "GMT+08:00 Taipei". At the bottom are "SAVE" and "CANCEL" buttons.

Synchronize the time with PC's time:

This is the default time adjust mode, the check box of "Synchronize with PC's time" would be checked by default.

Press "SAVE" button to do the time synchronization with PC time.

After the "SAVE" button was set, the MJPEG IP Camera time will be synchronized as PC's time. From the setting, the Server's time is the same as PC's time.

Change the time manually:

The following steps can change the time manually

1. Select the check box of "User Input"
2. Change the date according to the "yyyy/mm/dd" format.
3. Change the time according to the "hh:mm:ss" by 24 hours format.
4. Select the new time zone setting.
5. Select the "Adjust" button to adjust the time.

The time was changed by checking the "Server: " time field.

Get Time from a NTP server:

Select "*NTP*" Button

Key in the NTP server's IP address.

Press "SAVE" to activate it.

After the MJPEG IP Camera gets the time from NTP server, it will update the MJPEG IP Camera's time field.



Popup: Setup event message while motion or sensors has been activated

When any one of alarms enabled, and one of them detected, then a message window will be displayed on the screen.

Pop-up Setting

Pop-up text

Alarm pop-up text

Display mode ☐ Administrator ☐ All users

Sensor 1 ☐ ON ☒ OFF _____

Sensor 2 ☐ ON ☒ OFF _____

Motion detection ☐ ON ☒ OFF _____

SAVE **CANCEL**

You can have output message in case of events activated such as sensors or motion detection to warn user.



Firmware upgrade:

The MJPEG IP Camera supports firmware upgrades (the software that controls the operation in the MJPEG IP Camera). We would supply the latest firmware version for upgrade. Please contact your dealer for the latest version.

Download the latest firmware file from our website. Unzip this firmware file to binary file and store it into your PC. The file name should be **RZ.BIN** or similar for the MJPEG IP Camera. Then follow the steps as bellows carefully:

1. Close all other application programs which are not necessary for firmware update.
2. Disable Motion Detection function.
3. Disable Camera Tour function.
4. Set the video resolution to 176 x 144 or smaller.
5. Set the frame rate to 1 fps.
6. Select "Firmware update"
7. The Firmware Upgrade menu will appear:



8. Select the Firmware binary file. (It must be make sure that the Firmware only apply to

MJPEG IP Camera, once update, it will be burned into FLASH ROM of system.)

9. Once the firmware file was selected, select "Upload".



10. Press the "here" button to begin to upgrade firmware.



11. Press the "OK" button to continue.



The upgrade progress status information will be displayed on the screen.

Warning: The download firmware procedure can not be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the MJPEG IP Camera. Suggest that do not upgrade firmware via Wireless LAN due to high error rate possibly.

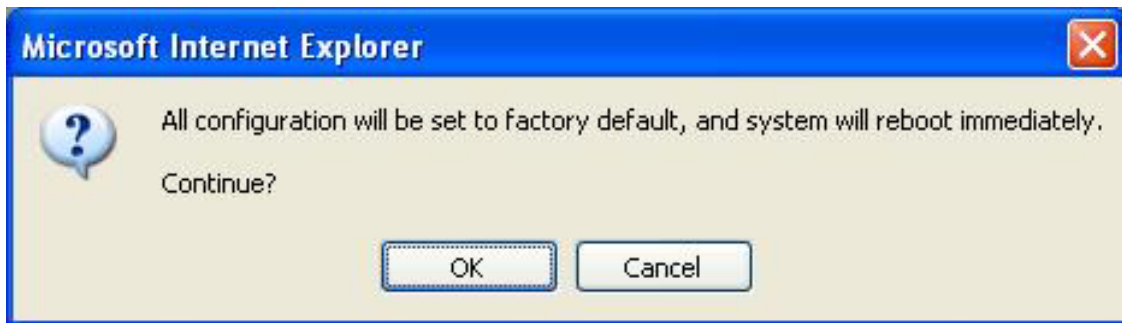
Please be aware that you should not turn off the power during updating the firmware and wait for finish message.

Once the upgrading process completed, the MJPEG IP Camera will reboot the system automatically.

Note: please wait for 20 seconds, and then you can connect to MJPEG IP Camera again.



Factory Default: Recall the MJPEG IP Camera factory default setting



The “*Factory Default*” button will restore to the factory default configuration, all information changed and saved on the flash will be lost, and restored to the factory default setting.

You will be prompt before restore to factory default setting.

Select “*OK*” to continue, or “*Cancel*” to abort it.



Reboot: Reboot the MJPEG IP Camera by hardware reset



The “*Reboot*” button will reboot the MJPEG IP Camera. It's useful while the MJPEG IP Camera got problem.

You will be prompt before restore to factory default setting.

Select “*OK*” to continue, or “*Cancel*” to abort it.

Trigger

You can send an image or output a trigger to control the alarm output, using Trigger section on the main page.



☐ FTP
☐ Mail
☐ Alarm 1
☐ Alarm 2
☐ Clear Alarm 1
☐ Clear Alarm 2

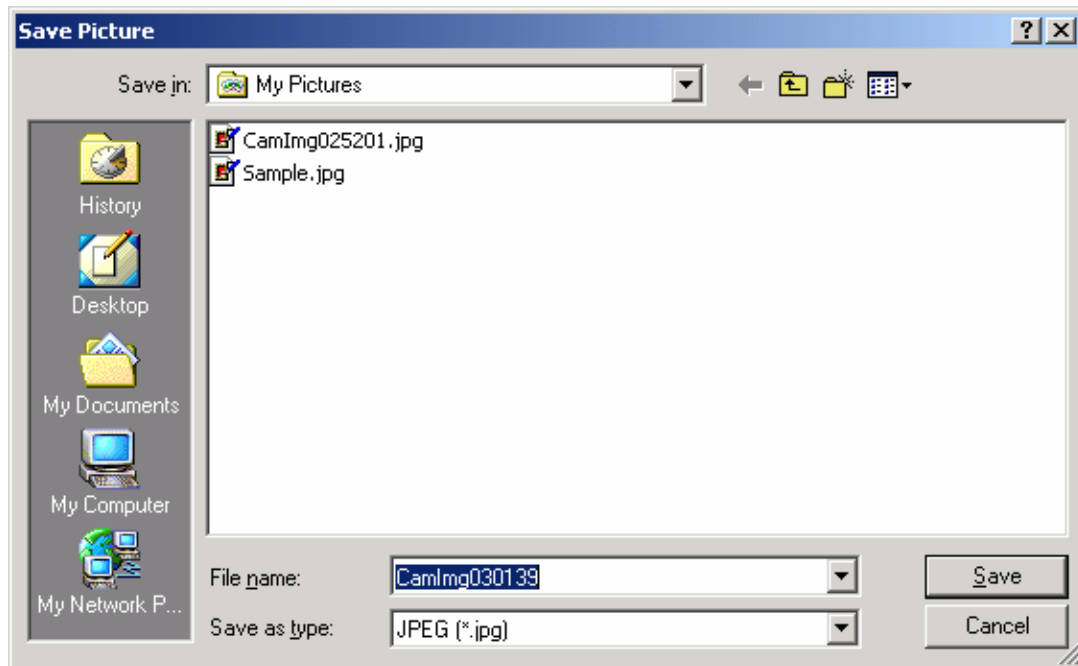
| Action | Meaning |
|---------------|--|
| FTP | Upload a captured image to server |
| Mail | Mail captured image to specific mail address |
| Alarm 1 | Enable Alarm output 1 |
| Alarm 2 | Enable Alarm output 2 |
| Clear Alarm 1 | Clear both alarm output 1 status |
| Clear Alarm 2 | Clear both alarm output 2 status |

Noted:

This function is available for logging-in as an administrator only.

Capture

You can capture current image and save it to storage media. The image is saved in the JPEG format.



Noted:

This function is available for logging-in as an administrator only.

RightMouseButton of ActiveX

Control

On the view of video, the plug-in ActiveX control support a lot of functions by clicking the right mouse button. This feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control, right click the RightMouseButton, then a menu pop-up. This menu provides feature that are unique to the ActiveX control. These functions include

- "View",
- "Splits",
- "Rotate",
- "Quality",
- "Resolution",
- "Image Recording...",
- "Save Current Picture As ..."
- ...



View Menu

“Resizable”

Make the image is resizable, but “Actual size disable”, the “Splits” is supported on this mode.

“Actual size”

Make the image show as the actual size, the “Splits” function does not work on this mode.

“StatusBar”

A status bar display on the bottom of the image.

“View”

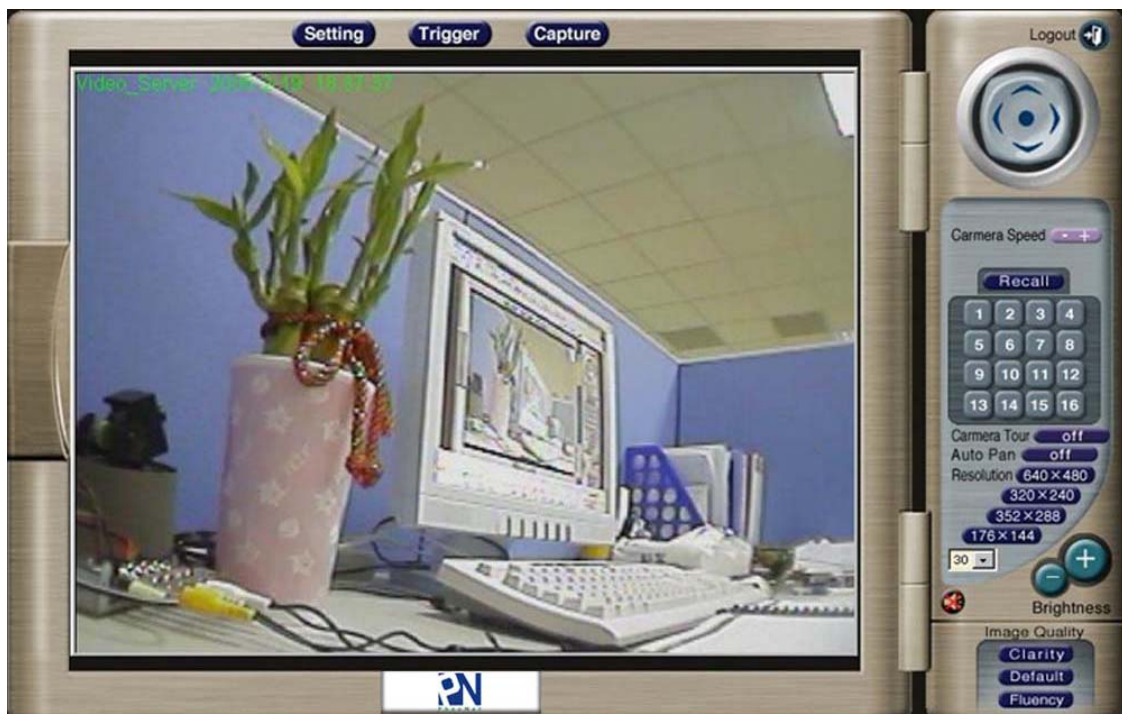
It makes the image resizable.



After the “Resizable” was selected, the border of the image changed to resizable border.



After the “Actual size” was selected, the image will displayed as the actual size, in this example, the image displays as a 640 x 480 pixels.



After the “Statusbar” was selected, a status bar will be displayed on the bottom of the image. It displays

- **Status**
Open/Close camera status
- **Resolution**
704x576, 640x480, 320x240, 352x288, 176x144, 160x120 (PAL)
640x480, 320x240, 352x288, 176x144, 160x120 (NTSC)
- **Quality**
Highest, High, Medium, Low, Lowest
- **Split**
1x1, 2x2, 3x3, 4x4
- **Rotate**
 - Normal: "Rotate 0", the default state.
 - Rotate: "Rotate 180", rotate the image by 180 degree; used on the camera was up side down mounted.
 - Flip Vertical : Flip the image vertically.
 - Flip Horizontal : Flip the image horizontally.
- **Frame Rate**
- **URL**



“Split”



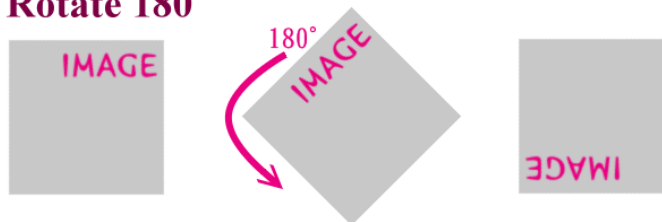
This function is used to support 4CH Video Server. Therefore, it's not so useful in Speed Dome MJPEG IP Camera.



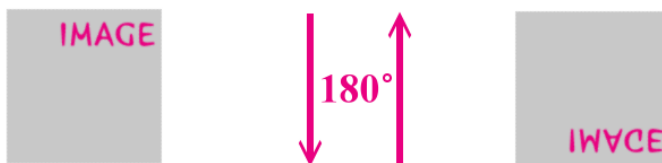
“Rotate”



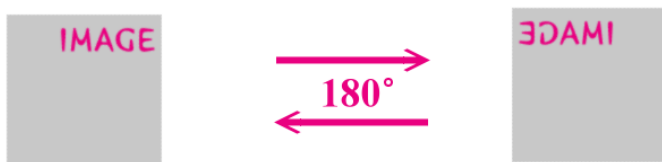
Rotate 180°



Flip Vertically



Flip Horizontally



After the “*Rotate 180*” was selected, the image will be overturned from 0 to the angle 180.



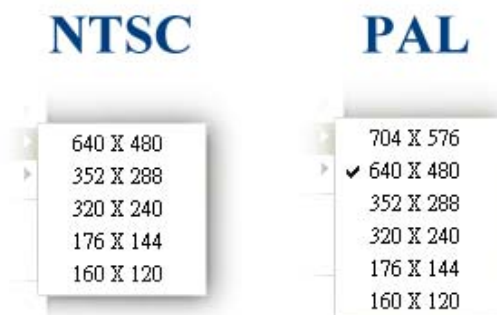
After the “*Flip Vertical*” was selected, the image will be overturned vertically.

After “*Flip Horizontal*” was selected, the image will be overturned horizontally.

“Resolution”

If MJPEG IP Camera type is NTSC, it will have 5 choices of resolution: 640x480, 352x288, 320x240, 176x144, and 160x120. While users control the PAL type of the MJPEG IP Camera, they could have 6 choices of resolution: 704x576, 640x480, 352x288, 320x240, 176x144, and 160x120.

The control method is the same as control panel's “*Quality*”.



“Quality”

Highest (The same as “Clarity” on control panel)

High

Medium (The same as “Default” on control panel)

Low

Lowest (The same as “Fluency” on control panel)

The control method is the same as control panel's “Quality”.

“Image Recording...-> Save as JPEG”

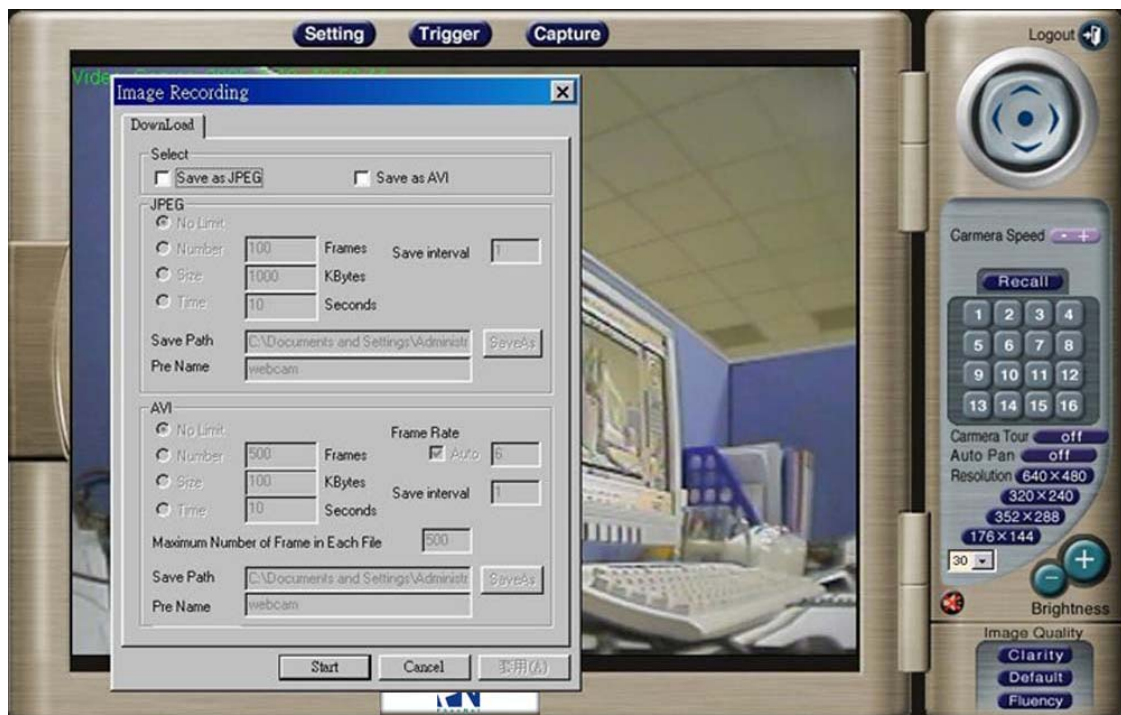
Select “Image Recording...”

The “Image Recording” pop-up window displays, select

“Save as JPEG”

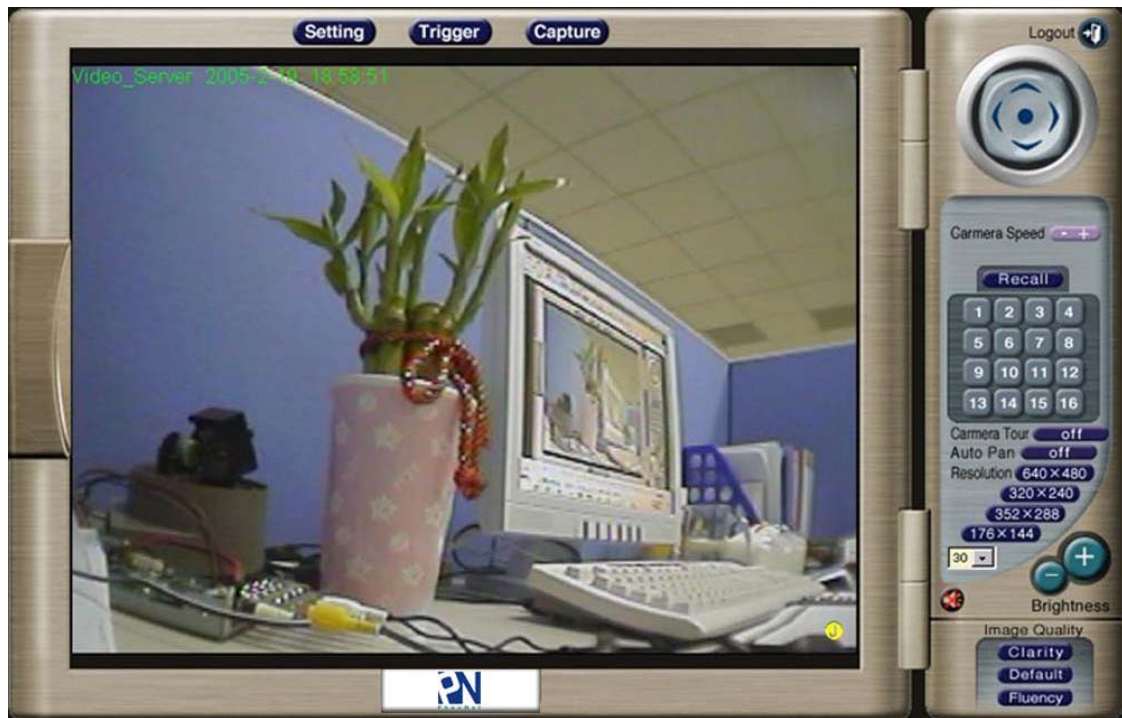
Input the “Download Number” for the number of images desire to be saving, or “Download No Limit” to save the images continuous, until the “Stop Image Recording” is selected.

Select “SaveAs”, the pop-up window to select the save path and file name prefix, select “Save” to continue.



Select "*Start*" to do the images download and save as JPEG files into the local PC.

During the download and save as JPEG files process, the yellow mark will be displayed on the right-down position to indicate the saving as JPEG files operation.



Before the "*Download Number*" of images is reached, or "*Download No Limit*", select "*Stop Image Recording*" to stop the image recording process.



After “Stop Image Recording”, list the files, these files are named as file_name_prefix_YYYY_MM_DD_HH_MM_SS_MS.jpg

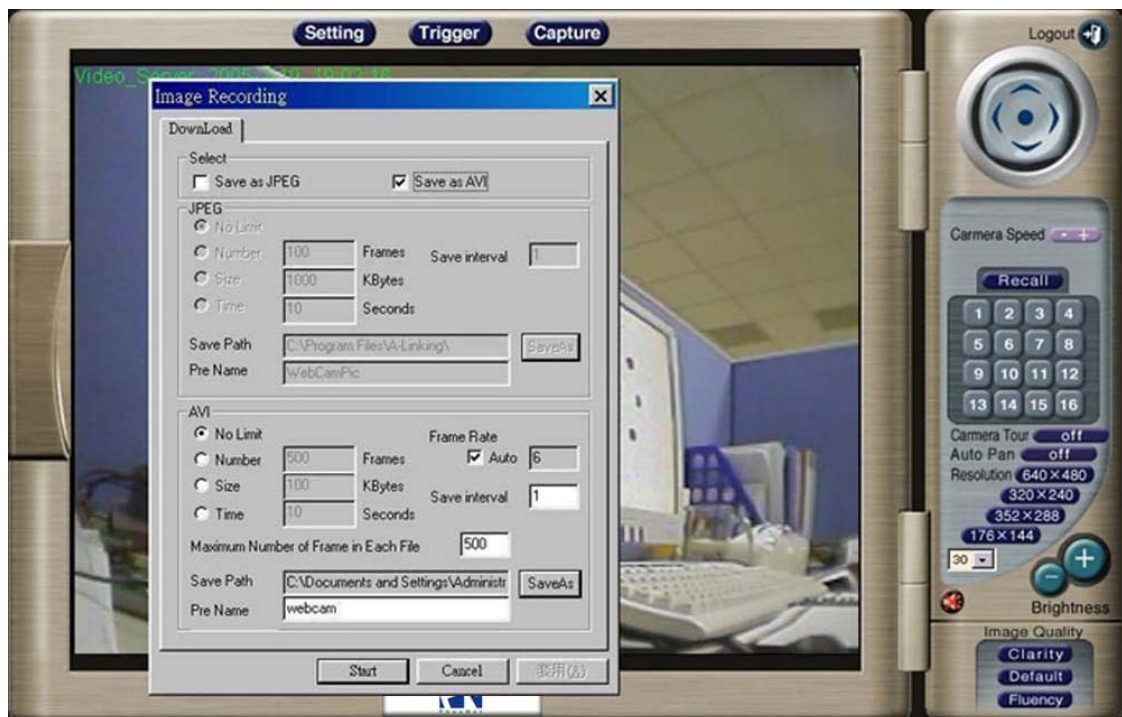
```

CA Command Prompt
07/08/2004 11:14 AM 13.546 WebCamPic_2004_7_8_11_14_25_609.jpg
07/08/2004 11:14 AM 13.705 WebCamPic_2004_7_8_11_14_25_671.jpg
07/08/2004 11:14 AM 13.550 WebCamPic_2004_7_8_11_14_25_859.jpg
07/08/2004 11:14 AM 13.687 WebCamPic_2004_7_8_11_14_25_906.jpg
07/08/2004 11:14 AM 13.701 WebCamPic_2004_7_8_11_14_26_109.jpg
07/08/2004 11:14 AM 13.647 WebCamPic_2004_7_8_11_14_26_156.jpg
07/08/2004 11:14 AM 13.647 WebCamPic_2004_7_8_11_14_26_343.jpg
07/08/2004 11:14 AM 13.654 WebCamPic_2004_7_8_11_14_26_484.jpg
07/08/2004 11:14 AM 13.631 WebCamPic_2004_7_8_11_14_26_578.jpg
07/08/2004 11:14 AM 13.577 WebCamPic_2004_7_8_11_14_26_671.jpg
07/08/2004 11:14 AM 13.561 WebCamPic_2004_7_8_11_14_26_750.jpg
07/08/2004 11:14 AM 13.680 WebCamPic_2004_7_8_11_14_26_937.jpg
07/08/2004 11:14 AM 13.655 WebCamPic_2004_7_8_11_14_27_0.jpg
07/08/2004 11:14 AM 13.574 WebCamPic_2004_7_8_11_14_27_156.jpg
07/08/2004 11:14 AM 13.671 WebCamPic_2004_7_8_11_14_27_265.jpg
07/08/2004 11:14 AM 13.648 WebCamPic_2004_7_8_11_14_27_343.jpg
07/08/2004 11:14 AM 13.684 WebCamPic_2004_7_8_11_14_27_515.jpg
07/08/2004 11:14 AM 13.632 WebCamPic_2004_7_8_11_14_27_593.jpg
07/08/2004 11:14 AM 13.626 WebCamPic_2004_7_8_11_14_27_671.jpg
07/08/2004 11:14 AM 13.672 WebCamPic_2004_7_8_11_14_27_843.jpg
07/08/2004 11:14 AM 13.622 WebCamPic_2004_7_8_11_14_27_921.jpg
07/08/2004 11:14 AM 13.619 WebCamPic_2004_7_8_11_14_28_93.jpg
07/08/2004 11:14 AM 13.632 WebCamPic_2004_7_8_11_14_28_171.jpg
07/08/2004 11:14 AM 13.630 WebCamPic_2004_7_8_11_14_28_265.jpg
07/08/2004 11:14 AM 13.615 WebCamPic_2004_7_8_11_14_28_328.jpg
07/08/2004 11:14 AM 13.630 WebCamPic_2004_7_8_11_14_28_515.jpg
07/08/2004 11:14 AM 13.611 WebCamPic_2004_7_8_11_14_28_562.jpg
07/08/2004 11:14 AM 13.639 WebCamPic_2004_7_8_11_14_28_765.jpg
07/08/2004 11:14 AM 13.599 WebCamPic_2004_7_8_11_14_28_843.jpg
07/08/2004 11:14 AM 13.667 WebCamPic_2004_7_8_11_14_28_906.jpg
07/08/2004 11:14 AM 13.616 WebCamPic_2004_7_8_11_14_29_93.jpg
07/08/2004 11:14 AM 13.690 WebCamPic_2004_7_8_11_14_29_171.jpg
287 File(s) 3,904,537 bytes
2 Dir(s) 5,960,056,832 bytes free

C:\temp\1>
    
```

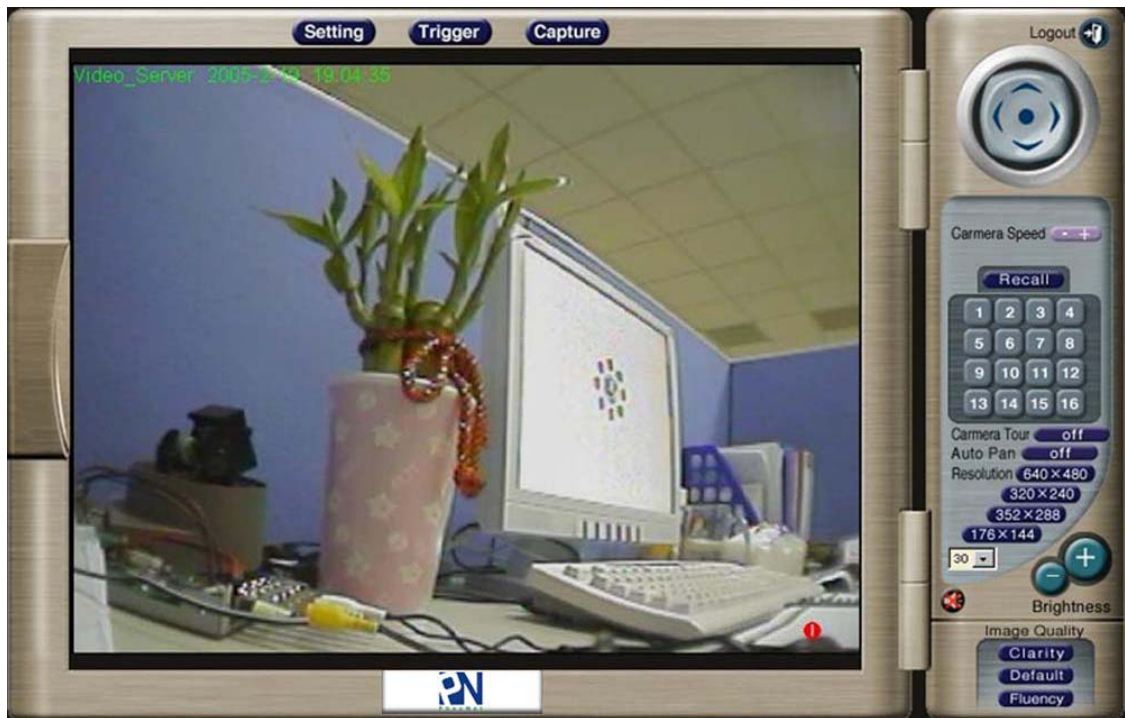
“Image Recording...-> Save as AVI”

1. Select “*Image Recording...*”
2. The “Image Recording” pop-up window displays, select
3. “*Save as AVI*”
4. Input the “*Avi Frame*” and “*Max Jpeg Num*” on each AVI file, until the “*Stop Image Recording*” is selected. “*Avi Frame*” is the frame rate setting of the recorded AVI file.
5. For each AVI file, the maximum saved images in each file are specified in “*Max Jpeg Num*”, once the saves image on each AVI file are reached by this number, then a new AVI file will created to save the following images, until the “*Stop Image Recording*” is selected.
6. Select “*SaveAs*”, the pop-up window to select the save path and file name prefix, select “*Save*” to continue.



Select “*Start*” to start the AVI files recording.

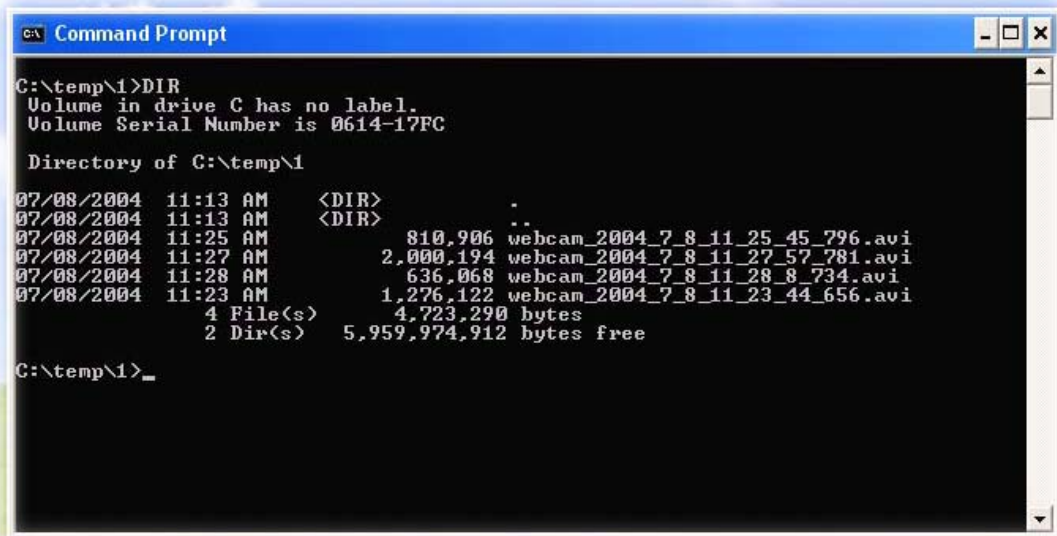
During the AVI file recording, a red icon displays on right-down position of the image to indicate the AVI saving process.



Press the “*Stop Image Recording*” to stop the save as AVI process.



After the “*Stop Image Recording*”, list the file on the selected saved directory, the file were saved by the filename_prefix_date_time.avi.



```
CA Command Prompt

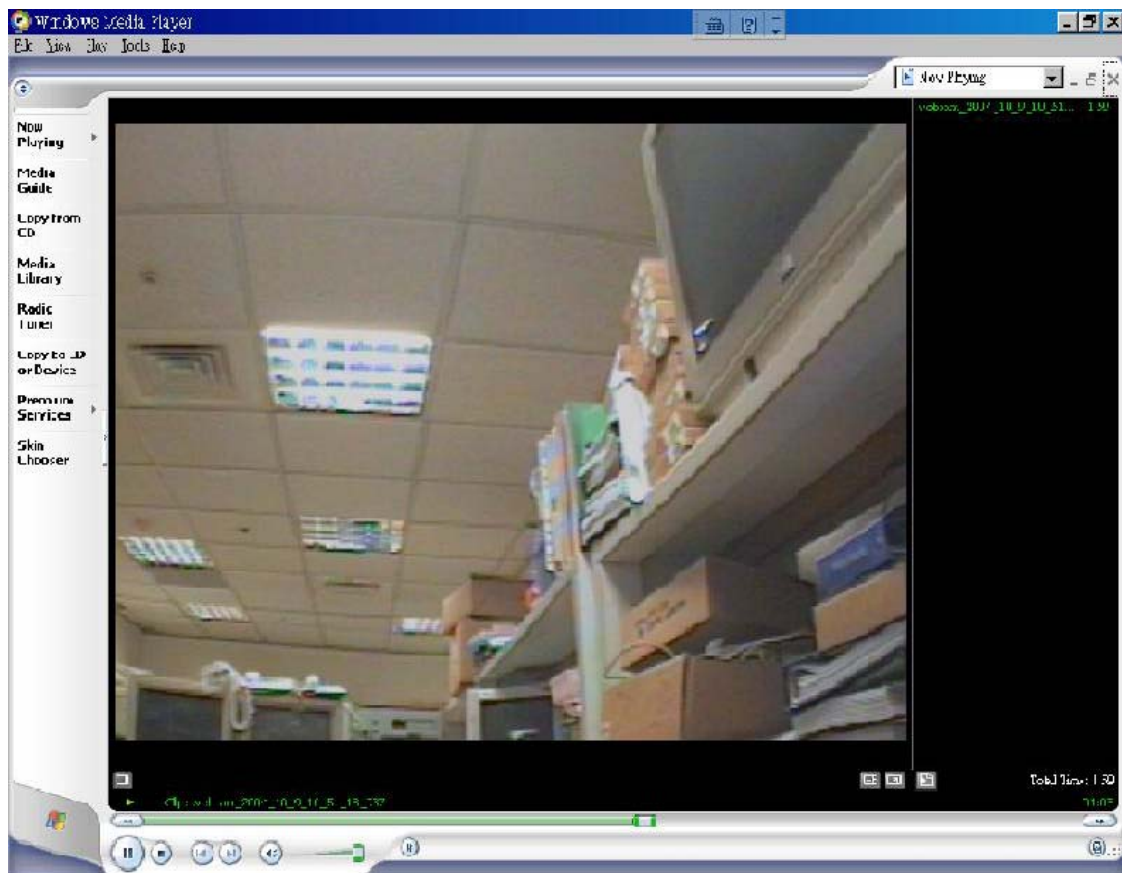
C:\temp\1>DIR
Volume in drive C has no label.
Volume Serial Number is 0614-17FC

Directory of C:\temp\1

07/08/2004  11:13 AM    <DIR>          .
07/08/2004  11:13 AM    <DIR>          ..
07/08/2004  11:25 AM             810,906 webcam_2004_7_8_11_25_45_796.avi
07/08/2004  11:27 AM          2,000,194 webcam_2004_7_8_11_27_57_781.avi
07/08/2004  11:28 AM           636,068 webcam_2004_7_8_11_28_8_734.avi
07/08/2004  11:23 AM          1,276,122 webcam_2004_7_8_11_23_44_656.avi
               4 File(s)          4,723,290 bytes
               2 Dir(s)      5,959,974,912 bytes free

C:\temp\1>_
```

The AVI files can be display by the standard Windows Media Player, but it needs the DixectX 9.0 or higher version to be installed.



“Save Current Picture As ...”

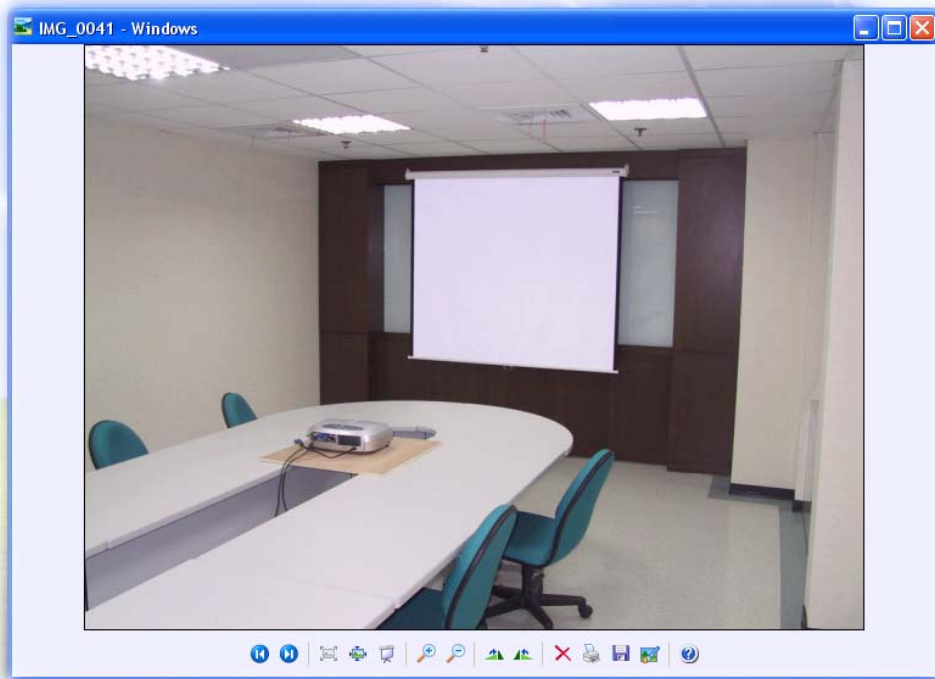
Use the “Save Current Picture As ...” to save the current display image into the local PC.



Input the saved “*File name*”, select “Save”

If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

MJPEG IP Camera User's Guide

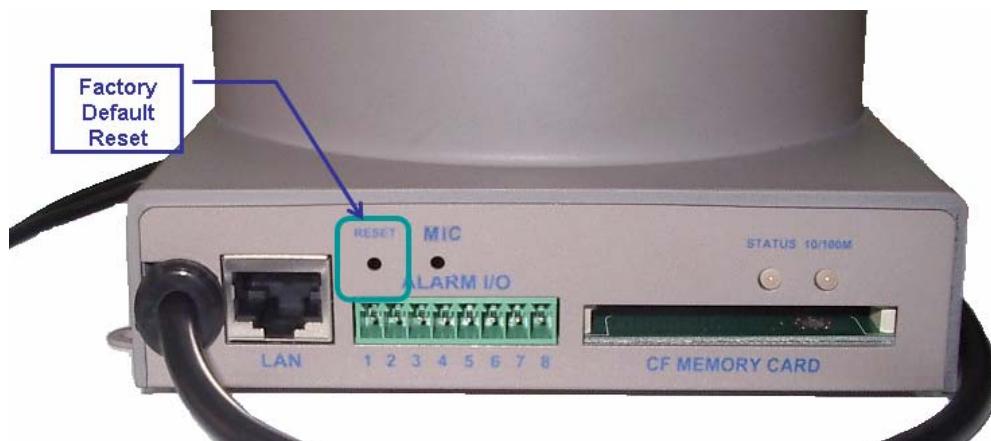


Appendix A: Restore Factory Default Settings

There is a button hidden in the pinhole above the Alarm I/O connector. It is used to restore the factory default settings. Sometimes restarting the MJPEG IP Camera will make the system back to a normal state. If the system still got problems after reset, user can restore the factory default settings and install it again.

Restore the MJPEG IP Camera:

1. Power off the MJPEG IP Camera.
2. Insert the paper clip or other tool and press and hold the button down continuously.
3. Power on the MJPEG IP Camera again.
4. Wait at least 8 seconds and release the tool. Then the MJPEG IP Camera has been restored to default settings.
- 5.



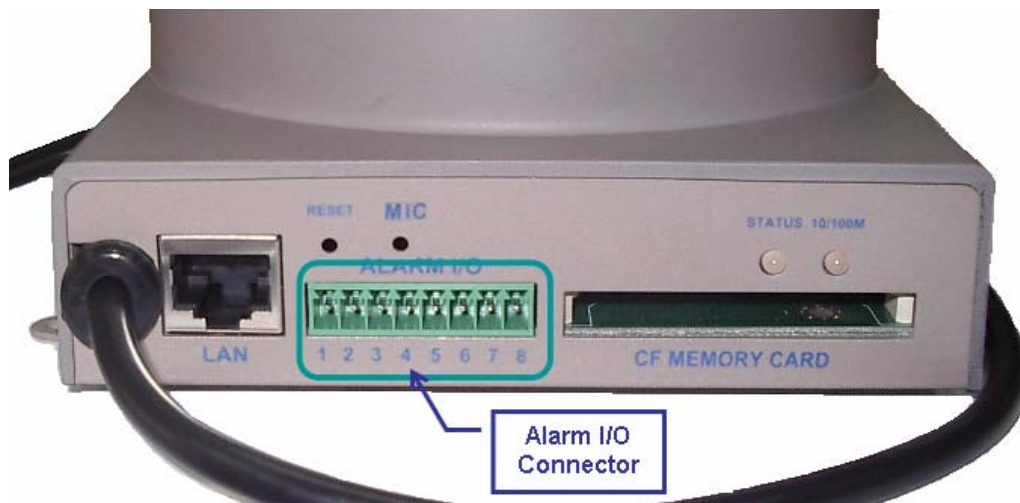
Note: Restoring the factory default setting will lose the all previous settings forever. User needs to run the IP Finder program to search the MJPEG IP Camera and configure it to let the MJPEG IP Camera work properly again.

Appendix B: Alarm I/O Connector

Interfacing to the External I/O

Some features of the MJPEG IP Camera can be activated by an external sensor that senses physical changes in the area MJPEG IP Camera is monitoring. These changes can include intrusion detection or certain physical change in the monitored area. For examples, the external sensor can be a door switch or an infrared motion detector. These devices are customer provided, and are available from dealers who carry surveillance and security products. Electrically, they must be able to provide a momentary contact closure.

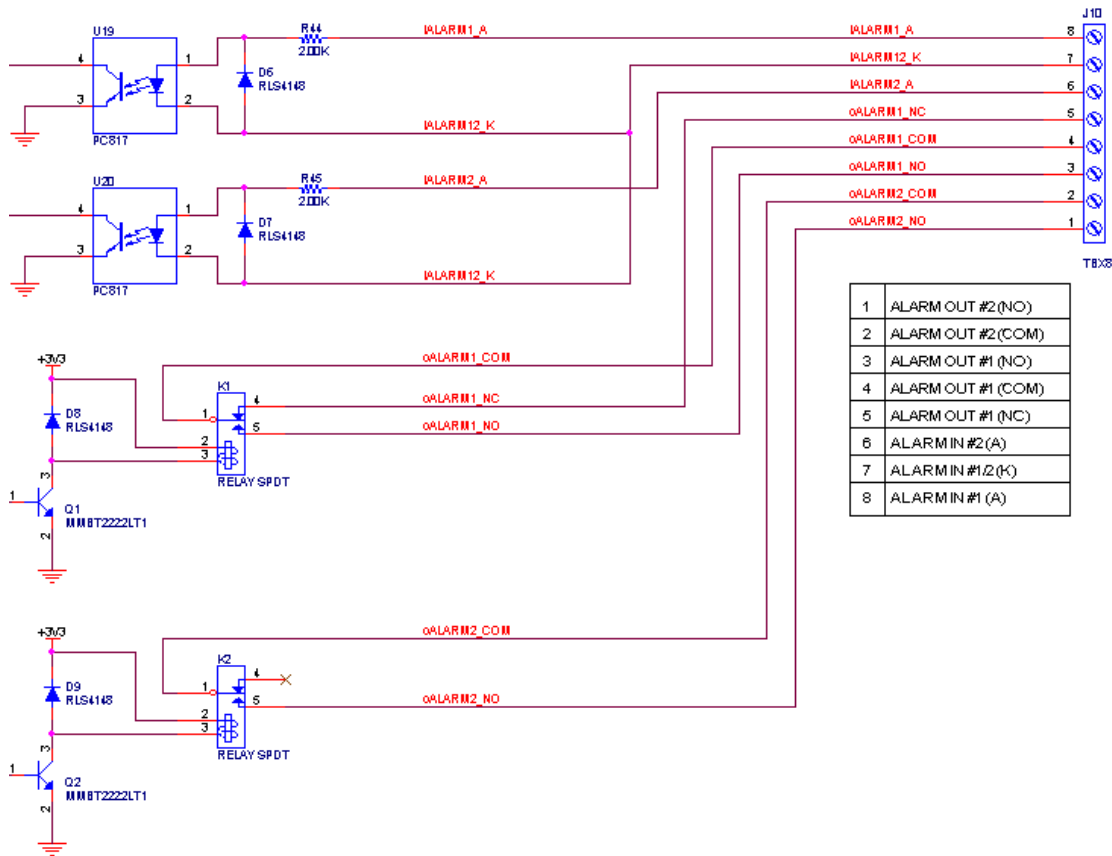
This MJPEG IP Camera provides a general I/O terminal block with two digital inputs and two outputs for device control. Pin 7 and 8 can be connected to an external sensor 1. Pin 7 and 6 can be connected to an external sensor 2. Both of the inputs, the voltage will be monitored from the initial state 'LOW'. The relay switch of pin 3, 4 and 5 can be used to turn on or off the external device 1. The relay switch of pin 1 and pin 2 can be used to turn on or off the external device 2. External Inputs/Outputs are working independently.



| Pin | Function |
|-----|--------------------------------------|
| 1 | Alarm Output #2 (NO) |
| 2 | Alarm Output #2 (COM). Max 24VDC, 1A |
| 3 | Alarm Output #1 (NO) |
| 4 | Alarm Output #1 (COM) |
| 5 | Alarm Output #1 (NC). Max 24VDC, 1A |
| 6 | Alarm Input #2 (A). Max 24VDC, 12mA |
| 7 | Alarm Input #1/2 (K). |

| | |
|---|--------------------------------------|
| 8 | Alarm Input #1 (A). Max 24VDC, 12mA. |
|---|--------------------------------------|

Explanation of External I/O Circuit Diagram Example



CAUTION!

- THE LOW VOAGE/CURRENT CIRCUITS AND HIGH VOAGE/ CURRENT CIRCUITS ARE IN THE MJPEG IP CAMERA CIRCUIT. THE QUALIFIED ELECTRICIAN SHOULD DO THE WIRING NOT BY YOURSELF. INCORRECT WIRING COULD DAMAGE MJPEG IP CAMERA. YOU COULD RECEIVE THE FATAL ELECTRIC SHOCK.
- THE EXTERNAL I/O IS NOT CAPABLE OF CONNECTING DIRECTLY TO DEVICES THAT REQUIRE LARGE AMOUNTS OF CURRENT. IN SOME CASES, A CUSTOM INTERFACE CIRCUIT (CUSTOMER PROVIDED) MAY HAVE TO BE USED. SERIOUS DAMAGE TO MJPEG IP CAMERA MAY RESU IF A DEVICE IS CONNECTED TO THE EXTERNAL I/O THAT EXCEEDS ITS ELECTRICAL CAPABILITY.

Appendix C: Troubleshooting & Frequently Asked Questions

| Question | Answer or Resolution |
|---|--|
| Features | |
| The video and audio codec is adopted in the MJPEG IP Camera. | The MJPEG IP Camera utilizes JPEG compression to providing high quality images. JPEG is a standard for image compression and can be applied to various web browsers without the need to install extra software. The audio codec is ADPCM compression. |
| The maximum number of users access MJPEG IP Camera simultaneously. | The maximum number of users is depend on the total bandwidth accessed to MJPEG IP Camera from clients. The data throughout of MJPEG IP Camera is around 5~6Mbps. Therefore, the maximum number of connected clients is varying by settings of resolution and frame rate. Obviously, the performance of the each connected client will slow down when many users are logged on. |
| The MJPEG IP Camera can be used outdoors or not. | The MJPEG IP Camera is not weatherproof. It needs to be equipped with a weatherproof case for outdoors using. However, equipped with a weatherproof case will disable the audio function of MJPEG IP Camera. |
| Install MJPEG IP Camera | |
| Status LED does not light up. | <ul style="list-style-type: none"> • Check and confirm that the standard AC adaptor, included in packaged, is used. Secure the power connector and re power it on again. • If the problem is not solved, the MJPEG IP Camera might be faulty. Contact your dealer for further help. |
| The network cabling is required for the MJPEG IP Camera. | The MJPEG IP Camera uses Category 5 UTP cable allowing 10 and/or 100 Base-T networking. |
| The MJPEG IP Camera will be installed and work if a firewall exists on the network. | If a firewall exists on the network, port 80 is open for ordinary data communication. The MJPEG IP Camera uses port 80(default) only. This port (or the port you specify from the Configuration screen if you change the default port) needs to be opened on the firewall. |
| The username and password for the first time or after factory default reset | Username = admin and leave password blank. Note that it's all case sensitivity. |
| Forgot the username and password | Follow the steps below. 1. Restore the factory default setting by press pressing and holding down more than 8 seconds when power on |

| | |
|--|--|
| | <p>MJPEG IP Camera.</p> <p>2. Reconfigure the MJPEG IP Camera.</p> |
| Forgot the IP address of the MJPEG IP Camera. | Check IP address of MJPEG IP Camera by using the IP Finder program. |
| IP Finder program cannot find MJPEG IP Camera. | <ul style="list-style-type: none"> • Re power the MJPEG IP Camera if cannot find the unit within 1 minutes. • Do not connect MJPEG IP Camera over a router. IP Finder program cannot detect MJPEG IP Camera. • If IP address is not assigned to the PC which running IP Finder program, then IP Finder program cannot find MJPEG IP Camera. Make sure that IP address is assigned to the PC properly. • Antivirus software on the PC might interfere with the setup program. Disable the firewall of the antivirus software during setting up MJPEG IP Camera. |
| Internet Explorer does not seem to work well with the MJPEG IP Camera | Make sure that your Internet Explorer is version 5.0 or later. If you are experiencing problems, try upgrading to the latest version of Microsoft's Internet Explorer from the Microsoft webpage at: http://www.microsoft.com/windows/ie . |
| IP Finder program fails to save the network parameters. | <ul style="list-style-type: none"> • Don't leave any space in the name field. Use underline, “_”, or dash, “-” to replace the space, “ ”. • Network may have trouble. Confirm the parameters and connections of the MJPEG IP Camera. |
| Access MJPEG IP Camera | |
| Cannot access the login page and other web pages of MJPEG IP Camera from Internet Explorer | <ul style="list-style-type: none"> • Maybe the IP Address of the MJPEG IP Camera is already being used by another device or computer. To confirm this possible problem, disconnect the MJPEG IP Camera from the network first, and then run the PING utility to check it out. • Maybe due to the network cable. Try correcting your network cable and configuration. Test the network interface by connecting a local computer to the MJPEG IP Camera via a crossover cable. • Make sure the Internet connection and setting is ok. • Make sure enter the IP address of Internet Explorer is correct. If MJPEG IP Camera has a dynamic address, it may have changed since you last checked it. • Network congestion may prevent the web page appearing quickly. Wait for a while. <p>The IP address and Subnet Mask of the PC and MJPEG IP Camera must be in the same class of the private IP address on the LAN.</p> <ul style="list-style-type: none"> • Make sure the http port used by the MJPEG IP Camera, default=80, is forward to the MJPEG IP Camera's private IP address. • The port number assigned in your MJPEG IP Camera might not be available via Internet. Check your ISP for available port. • The proxy server may prevent you from connecting directly |

| | |
|---|---|
| | <p>to MJPEG IP Camera, set up not to use the proxy server.</p> <ul style="list-style-type: none"> • Confirm that Default Gateway address is correct. • The router needs Port Forwarding feature. Refer to your router's manual for details. • Packet Filtering of the router may prohibit access from an external network. Refer to your router's manual for details. • Access MJPEG IP Camera from the Internet with the global IP address of the router and port number of MJPEG IP Camera. • Some routers reject the global IP address to access MJPEG IP Camera on the same LAN. Access with the private IP address and correct port number of MJPEG IP Camera. • When you use DDNS, you need to set Default Gateway and DNS server address. • If it's not working after above procedure, reset MJPEG IP Camera to default setting and installed it again. • If the problem is not solved, the MJPEG IP Camera might be faulty. Contact your dealer for further help. |
| Image or video does not appear in the main page. | <ul style="list-style-type: none"> • The first time the PC connects to MJPEG IP Camera, a pop-up Security Warning window will appear to download ActiveX Controls. When using Windows NT, Windows 2000 or Windows XP, log on with an appropriate account that is authorized to install applications. • Network congestion may prevent the Image screen from appearing quickly. You may choose lower resolution to reduce the required bandwidth. |
| Check the MJPEG IP Camera's ActiveX is installed on your computer | <p>Go to C:\Windows\Downloaded Program Files and check to see if there is an entry for the file "WebWatch Class". The status column should show "Installed". If the file is not listed, make sure your Security Settings in Internet Explorer are configured properly and then try reloading the MJPEG IP Camera's home page. Most likely, the MJPEG IP Camera ActiveX control did not download and install correctly. Check your Internet Explorer security settings and then close and restart Internet Explorer. Try to browse and log in again.</p> |
| Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls". | <p>Setup the IE security settings or configure the individual settings to allow downloading and scripting of <i>unsigned</i> ActiveX controls.</p> |
| The MJPEG IP Camera work locally but not externally. | <ul style="list-style-type: none"> • Might be caused from the firewall protection. Check the Internet firewall with your system or network administrator. The firewall may need to have some settings changed in order for the MJPEG IP Camera to be accessible outside your LAN. • Make sure that the MJPEG IP Camera isn't conflicting with any other web server running on your LAN. • Check the configuration of the router settings allow the MJPEG IP Camera to be accessed outside your local LAN. |

| | |
|--|---|
| The unreadable characters are displayed. | Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer. |
| Frame rate is slower than the setting. | <ul style="list-style-type: none"> • The traffic of the network and the object of the image affect the frame rate. The network congestion causes frame rate slower than the setting. • When more than one client were viewing, the frame rate becomes slower. • Ethernet switching hub can smooth the frame rate especially in viewing on the Multi-Camera screen. |
| Blank screen or very slow video when audio is enabled. | <ul style="list-style-type: none"> • Your connection to the MJPEG IP Camera does not have enough bandwidth to support a higher frame rate for the streamed image size. Try reducing the video streaming size to 176x144 or 320x240 and/or disabling audio. • Audio will consume 32 to 64 kbps. Disable audio to improve video. Your Internet connection may not have enough bandwidth to support streaming audio from the MJPEG IP Camera. |
| Image Transfer on e-mail or FTP does not work. | <ul style="list-style-type: none"> • Default Gateway and DNS server address should be set up correctly. • If FTP does not work properly, ask your ISP or network administrator about the transferring mode of FTP server. |
| Pan/Tilt, Zoom and Focus do not work. (including Click to Center and Preset Positioning) | <ul style="list-style-type: none"> • Click [Refresh] on the Internet Explorer when the communication stops with the MJPEG IP Camera. The image will refresh. • Other clients may be operating Pan/Tilt. • Pan/Tilt operation has reached the end of corner. • The Pan/Tilt operation may be locked by turning off Remote Camera Control. |
| Pan/Tilt, Zoom and Focus do not work smoothly. | There may be a slight delay when you are using the Pan/Tilt feature in conjunction with streaming audio and video. If you find that there is a significant delay while panning or tilting the camera, try disabling the audio streaming and/or reducing the video streaming size. |
| Video Quality of MJPEG IP Camera | |
| The focus on the MJPEG IP Camera is bad. | <ul style="list-style-type: none"> • The lens is dirty or dust is attached. Fingerprints, dust, stain, etc. on the lens can degrade the performance of the Automatic Focusing feature (for PTZ model). Clean the lens with lens cleaner. Or adjust the camera focus manually (for PT model) • Manual focusing may be set. Press appropriate one of the Focus buttons at the operation panel (for PTZ model). • Blurred images may have been registered when registering or modifying the preset button or home position button. Adjust the focus in manual focusing again, or press the Auto Focus button (for PTZ model). • The image may be out of focus, if the object is too near, or depending on the zoom position. Move the object off MJPEG IP Camera, or adjust the zoom position (for PTZ model). • Some objects are difficult to focus on by Auto Focus button. |

| | |
|--|--|
| | Press the Auto Focus button and put it into operation again. When the objects are still out of focus, adjust the focus using manual focusing, or change the objects using Pan/Tilt operation or Zooming features (for PTZ model). |
| The color of the image is poor or strange. | <ul style="list-style-type: none"> • Adjust White Balance (for PTZ model). • To insure the images you are viewing are the best they can be, set the Display property setting (color quality) to 16bit at least and 24 bit or higher if possible within your computer. • The configuration on the MJPEG IP Camera image display is incorrect. You need to adjust the image related parameters such as brightness, contrast, hue and saturation properly. |
| Image flickers. | <ul style="list-style-type: none"> • Wrong power line frequency makes images flicker. Make sure the NTSC or PAL format of your MJPEG IP Camera. • If the object is dark, the image will flicker. Make the condition around the MJPEG IP Camera brighter. |
| Noisy images occur. | The video images might be noisy if the MJPEG IP Camera is located in a very low light environment. Make the condition around the MJPEG IP Camera brighter. |
| Miscellaneous | |
| How to Reboot the MJPEG IP Camera | If you just want to reboot system without change anything. Go to Network page and click SAVE button directly, then system will reboot again. |
| Can not play the recorded AVI file | Have installed Microsoft®'s DirectX 9.0 or later and use the Windows Media Player 9 or later to play the AVI filed recorded by the ActiveX. |

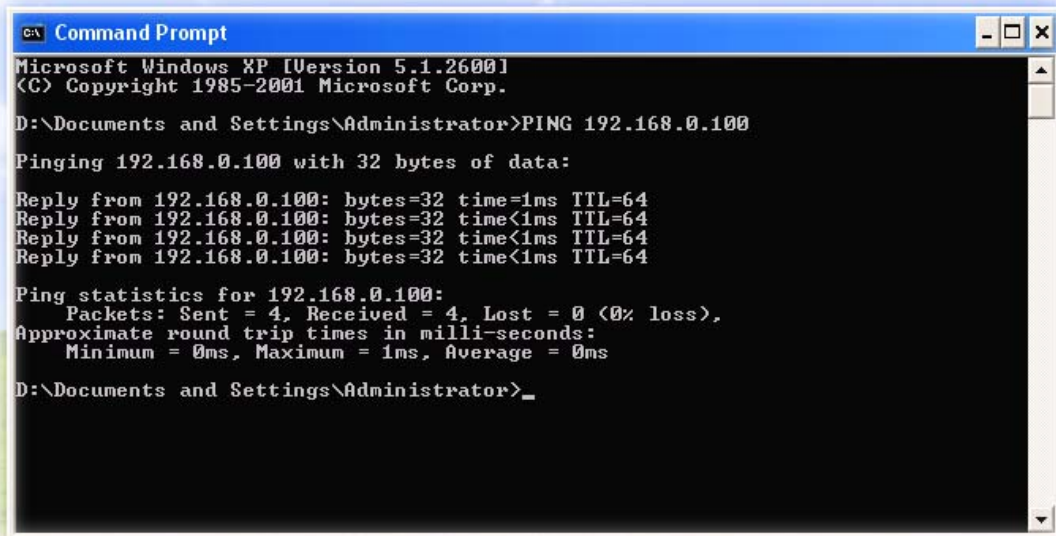
Appendix D: PING IP Address

The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm MJPEG IP Camera installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of MJPEG IP Camera, utilize the PING command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the MJPEG IP Camera.

The replies, as illustrated below, will provide an explanation to the problem.



```

C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\Administrator>PING 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time=1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64
Reply from 192.168.0.100: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

D:\Documents and Settings\Administrator>_

```

If you want to detect any other devices conflicts with the IP address of MJPEG IP Camera, also can utilize the PING command but you must disconnect the MJPEG IP Camera from the network first.

Appendix E: Bandwidth Estimation

The frame rate of video transmitted from the MJPEG IP Camera depends on connection bandwidth between client and server and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements from your MJPEG IP Camera.

Image bandwidth is approximately equal to the average frame rate in frames per second multiplied by the average frame data size in kilobits. Frame data size, or the number of bits comprising a single video frame varies a great deal from depending on scene complexity, lighting conditions, camera noise, etc. The table shown below is reference figures. Actual results generated by the MJPEG IP Camera may be varying.

| Image Resolution | Average range of Data Sizes |
|------------------|-----------------------------|
| 176 x 144 (QCIF) | 20 – 40k bit |
| 320 x 240 (QVGA) | 56– 92k bit |
| 352 x 288 (CIF) | 64 – 112k bit |
| 640 x 480 (VGA) | 160 – 320k bit |

For example, streaming 2 fps of 320 x 240 video requires 112 to 184 kbps (kilobits per second). Therefore, with a 128K upload connection; you will typically see 3 to 6 frames per second with 176 x 144 resolution and 1 to 2 frames per second with 320 x 240 resolution without audio stream.

Note: Audio streaming also takes bandwidth around 32 kbps to 64kbps. Most ADSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

Appendix F: Specifications

| Model | MJCAS-310PTD |
|----------------------------|--|
| Control Interface | Internet Explorer |
| Preset Number | 16 |
| Horizontal rotation range | 0° to 325° |
| Vertical rotation range | 0° to 90° |
| O.P Temperature | 5°C to 45°C (40°F to 113°F) |
| Operating Humidity | 10% ~ 80% |
| Power Supply | 12V DC \pm 10% |
| Power Consumption | 6W max. |
| Alarm Input/Output | 2xIn / 2xOut |
| Dimension | 120*116.5 (DXH) |
| Camera Module | |
| Image Pick-up Device | Sharp 1/3" interline transfer CCD sensor |
| Effective Picture Elements | NTSC:768*494 (H*V), PAL: 752*582 (H*V) |
| Horizontal Resolution | 380 TV lines |
| Sensitivity | 0.2 Lux @ F=2.0 |
| S/N Ratio | More than 48 dB |
| Gamma Characteristics | 0.45 |
| Auto Iris Control | Video-Drive Iris Control |
| Auto Gain Control | Built in |
| Auto White Balance | Color Temperature: 2500°K ~ 9500°K. |
| Synchronous System | Internal, Negative sync. |
| Video Output | 1Vp-p / 75 Ohm |
| BNC Video Out | Yes |
| IP Module | |
| Codec | JPEG, 3 levels |

| | |
|----------------------------------|---|
| Resolution | 704*576, 640*480, 352*288, 320*240, 176*144, 162*120 |
| Frame Rate | Up to 30fps for all resolutions |
| Audio Streaming | Yes |
| Compatibility | Windows ME, 2000, XP, 2003 |
| LAN I/F | 10/100M |
| Notification | Email, FTP |
| RAM | 64Mb SDRAM |
| Flash | 16Mb NOR Flash Memory |
| Image Storing Memory | By CF Card |
| Operating System | uCLinux |
| Type Of IP Address Needed | Statistic or Dynamic |
| Extensible Port | CF Memory Card |
| Firmware Upgrade | Ethernet |
| Security | 2 Levels, Administrator or user |
| Viewer | Microsoft® Internet Explorer 5.0 or later |
| IP Filtering | Yes |
| Networking Protocol | TCP/IP, HTTP, SMTP, FTP, NTP, DNS, DDNS, ARP and DHCP |
| Communication Protocol | PPPoE |

Appendix G: Time Zone Table

GMT stands for Greenwich Mean Time which is the global time that all time zones are measured from.

(GMT-12:00) International Date Line West
(GMT-11:00) Midway Island, Samoa
(GMT-10:00) Hawaii
(GMT-09:00) Alaska
(GMT-08:00) Pacific Time (US & Canada); Tijuana
(GMT-07:00) Arizona
(GMT-07:00) Chihuahua, La Paz, Mazatlan
(GMT-07:00) Mountain Time (US & Canada)
(GMT-06:00) Central America
(GMT-06:00) Central Time (US & Canada)
(GMT-06:00) Guadalajara, Mexico City, Monterrey
(GMT-06:00) Saskatchewan
(GMT-05:00) Bogota, Lima, Quito
(GMT-05:00) Eastern Time (US & Canada)
(GMT-05:00) Indiana (East)
(GMT-04:00) Atlantic Time (Canada)
(GMT-04:00) Caracas, La Paz
(GMT-04:00) Santiago
(GMT-03:30) Newfoundland
(GMT-03:00) Brasilia
(GMT-03:00) Buenos Aires, Georgetown
(GMT-03:00) Greenland
(GMT-02:00) Mid-Atlantic
(GMT-01:00) Azores
(GMT-01:00) Cape Verde Is.
(GMT) Casablanca, Monrovia
(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague
(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
(GMT+01:00) West Central Africa
(GMT+02:00) Athens, Istanbul, Minsk
(GMT+02:00) Bucharest
(GMT+02:00) Cairo
(GMT+02:00) Harare, Pretoria
(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius
(GMT+02:00) Jerusalem
(GMT+03:00) Baghdad
(GMT+03:00) Kuwait, Riyadh
(GMT+03:00) Moscow, St. Petersburg, Volgograd
(GMT+03:00) Nairobi

(GMT+03:30) Tehran
(GMT+04:00) Abu Dhabi, Muscat
(GMT+04:00) Baku, Tbilisi, Yerevan
(GMT+04:30) Kabul
(GMT+05:00) Ekaterinburg
(GMT+05:00) Islamabad, Karachi, Tashkent
(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
(GMT+05:45) Kathmandu
(GMT+06:00) Almaty, Novosibirsk
(GMT+06:00) Astana, Dhaka
(GMT+06:00) Sri Jayawardenepura
(GMT+06:30) Rangoon
(GMT+07:00) Bangkok, Hanoi, Jakarta
(GMT+07:00) Krasnoyarsk
(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
(GMT+08:00) Irkutsk, Ulaan Bataar
(GMT+08:00) Kuala Lumpur, Singapore
(GMT+08:00) Perth
(GMT+08:00) Taipei
(GMT+09:00) Osaka, Sapporo, Tokyo
(GMT+09:00) Seoul
(GMT+09:00) Yakutsk
(GMT+09:30) Adelaide
(GMT+09:30) Darwin
(GMT+10:00) Brisbane
(GMT+10:00) Canberra, Melbourne, Sydney
(GMT+10:00) Guam, Port Moresby
(GMT+10:00) Hobart
(GMT+10:00) Vladivostok
(GMT+11:00) Magadan, Solomon Is., New Caledonia
(GMT+12:00) Auckland, Wellington
(GMT+12:00) Fiji, Kamchatka, Marshall Is.
(GMT+13:00) Nuku'alofa

Appendix H: DDNS Application

1. Preface

If you have a Cable modem, xDSL, ISDN or Dialup, this is a great way to host your own **Web Server, FTP Server, Mail Server, MJPEG IP Camera** or other TCP/IP Service. Get your own domain like `www.yourname.com*`, `www.yourname.com.tw*` etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). Your domain name's dynamic IP address is automatically tracked by a DDNS server.

Host your own **Web Server, FTP Server, Mail Server, MJPEG IP Camera** and much much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS services is only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our MJPEG IP Camera or IP camera on.

(1) Environment of Fixed Valid IP Network

If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

If users is under a environment of dynamic IP network (Dial-up ADSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of the MJPEG IP Camera or IP camera in order to let the outside administrator be able to access through internet.

3. Application Steps—DDNS & Domain Name

- (1). Visit the following web site : <http://www.dyndns.org/> (Pink No.1)
- (2). Click “Account” (Pink No. 2)



- (3). After the columns show up at the left side, click “Create Account”.



- (4). Fill the application agreement and necessary information.
 - a. Input Name
 - b. E-mail input and confirmation
 - c. Password input and confirmation
 - d. Submit all the input information and finish creating a account


Create Account

Please complete the form below to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow these directions within 48 hours, you will need to recreate your account.

Policy Last Modified: May 4, 2004

1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE

All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises

I have read and agree to the Acceptable Use Policy above ☒ 

Username

Your username will be used to login to your account and make changes.

Username:

← Input login name

E-mail Address

The e-mail address you enter must be valid. Instructions to activate your account will be sent to the e-mail address provided. You must keep this address current and accounts with invalid e-mail addresses will be removed with no warning. We do not sell our list to anyone. Read more about our [privacy policy](#)

E-Mail Address:

← Input e-mail address

Confirm E-Mail Address:

← Confirm e-mail address

Password

The password you enter will be used to access your account. It must be more than 5 characters and cannot be your username.

Password:

← Input login password

Confirm Password:

← Confirm login password

Submit →

Create Account

Reset Form

- (5). Check your e-mail mailbox. There will be an e-mail with a title "Your DynDNS.org Account Information". Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.

副本: www.dyndns.org

主旨: Your DynDNS.org Account Information

Your DynDNS.org user account 'longteklewis' has been created. You must visit the confirm the account creation process.

Our basic service offerings are free, but they are supported by our premium services. See

To confirm your account, please go to the address below: **Click to confirm**

<https://www.dyndns.org/account/confirm/dDbTlb0mO3f-MyfffrlGQ>

Please note: If you did not sign up for this account, this will be the only communication you addresses are kept on file. We apologize for any inconvenience this correspondence may be visiting our site and requesting an account.

Sincerely,

The Dynamic Network Services Support Department support@dyndns.org

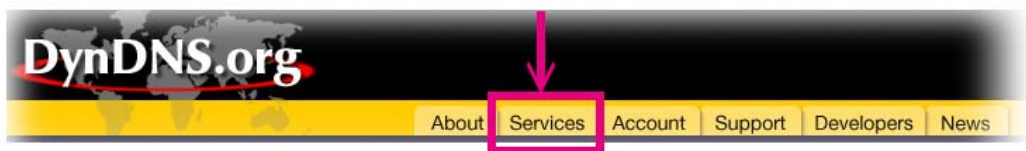
- (6). Enter the web page <http://www.dyndns.org/> again. Input your username and password that you just applied to login administration interface of DDNS service.



- (7). If the correct username and password are input, you can see the following picture at the top-right of the login page.



- (8). Click the “[Services](#)”.



- (9). Click the “ [Dynamic DNS](#) ” and then click the “[Add a host](#)”.



(10). We could create a domain name without any charge at this step. First, we input the host name. (Pink No.1) Then we pick a domain that is easy to remember. (Pink No.2) Finally, click the “Add Host” to submit the domain name information. (Pink No.3)

The screenshot shows a web form titled "New Dynamic DNS Host". It contains the following fields and elements:

- Hostname:** A text input field with a pink arrow labeled "1" pointing to it.
- For your own domain (eg: yd...):** A dropdown menu showing various domain options like "dyndns.biz", "dyndns.info", "dyndns.org" (highlighted), "dyndns.tv", "dyndns.ws", "game-host.org", "game-server.cc", "gotdns.com", "gotdns.org", "homedns.org", "homeftp.net", "homeftp.org", "homeip.net", "homelinux.com", "homelinux.net", "homelinux.org", "homeunix.com", "homeunix.net", "homeunix.org", "is-a-geek.com", "is-a-geek.net", and "is-a-geek.org". A pink arrow labeled "2" points to this menu.
- IP Address:** A text input field.
- Enable Wildcard:** A checkbox.
- Mail Exchanger (optional):** A text input field.
- Buttons:** "Add Host" (highlighted with a pink box and a pink arrow labeled "3" pointing to it) and "Reset For".

At the bottom of the form, there is a copyright notice: "Copyright ©1999-2004 Dynamic Net", and links for "Privacy Policy" and "Acceptable Use Policy".

4. Setup the DDNS and PPPoE

At last, users have to enter the web page of MJPEG IP Camera or IP camera and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE pages. After saving the modification, restart the device. The external users could browse the MJPEG IP Camera or IP camera by the input of their domain name.